

**ALONE, TOGETHER: HOW POLITICS AND INTERNATIONAL RELATIONS
COMPEL AND MAINTAIN ASYMMETRICAL POWER RELATIONSHIPS
BETWEEN THE INDIGENOUS PEOPLES OF LATIN AMERICA AND OTHER
ACTORS**

by

Sarah A.V. Ellington

A dissertation submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Political Science and International Relations

Spring 2022

© 2022 Sarah A.V. Ellington
All Rights Reserved

**ALONE, TOGETHER: HOW POLITICS AND INTERNATIONAL RELATIONS
COMPEL AND MAINTAIN ASYMMETRICAL POWER RELATIONSHIPS
BETWEEN THE INDIGENOUS PEOPLES OF LATIN AMERICA AND OTHER
ACTORS**

by

Sarah A.V. Ellington

Approved:

David P. Redlawsk, Ph.D.
Chair of the Department of Political Science and International Relations

Approved:

John Pelesko, Ph.D.
Dean of the College of Arts and Sciences

Approved:

Louis F. Rossi, Ph.D.
Vice Provost for Graduate and Professional Education and
Dean of the Graduate College

I certify that I have read this dissertation and that in my opinion it meets the academic and professional standard required by the University as a dissertation for the degree of Doctor of Philosophy.

Signed:

Benjamin E. Bagozzi, Ph.D.
Professor in charge of thesis on behalf of the Advisory Committee

I certify that I have read this dissertation and that in my opinion it meets the academic and professional standard required by the University as a dissertation for the degree of Doctor of Philosophy.

Signed:

Julio Carrión, Ph.D.
Member of dissertation committee

I certify that I have read this dissertation and that in my opinion it meets the academic and professional standard required by the University as a dissertation for the degree of Doctor of Philosophy.

Signed:

Kassra A.R. Oskooii, Ph.D.
Member of dissertation committee

I certify that I have read this dissertation and that in my opinion it meets the academic and professional standard required by the University as a dissertation for the degree of Doctor of Philosophy.

Signed:

Jennifer Lambe, Ph.D.
Member of dissertation committee

ACKNOWLEDGEMENTS

As with every dissertation project, this work rests on the shoulders of many. I have so many thanks to extend.

First, thank you to everyone who has read this project in any previous form, including Kyong-Min Son, anonymous reviewers, fellow UD students in CRISP, and other faculty at the University of Delaware. This would not be possible without your feedback. Many thanks to Joanne Miller for overseeing such an excellent program.

A tremendous thank you to the (current and former) staff of our department: Barbara Ford, Daytonia Campbell, Charlotte McDermitt, Lisa Berry, Kaylee Olney, and Monique Whittle. This department would be nothing without your hard work, stellar organization skills, and kindness.

This entire journey would not have begun without the encouragement and support of William Dramby. Thank you for everything. We have known each other for over a decade now, and you have shaped my love for critical theory from day one.

Many thanks to each of my family members. Thank you to my parents for all of the love and support over this last quarter century, and for the encouragement to follow my passions. Thank you to Faith (my sexiest and best friend on earth) for every phone call, text, voice memo, and minute you have spent listening. I would not be here without you. Thank you to Corinne and Teddy for always brightening my day. Thank you to my

grandparents for asking me to keep going when I wanted to quit, and for showing me joy outside of work.

A special thank you to Chris (and Bill) for keeping me sane (ish), holding my hand, and keeping fun facts limited when I asked for quiet to work. I love you, and I am so proud of you and us!

Of course, huge thanks to my committee members. Thank you to Jenny Lambe for the generous and insightful feedback. Thank you to Kassra Oskooii for the mentorship, constant support and encouragement, excellent feedback, and all of the time that you have dedicated to making me a better scholar. Thank you to Julio Carrión for all of the support, knowledge, and the many hours of feedback that you gave me to improve my dissertation.

And finally: there are not words enough to thank Ben Bagozzi. I am so incredibly grateful for the kindness, empathy, brilliance, innovation, and time from you. Thank you for never letting me quit, for allowing me to explore every idea that came into my head, for reading that horrible first pass at my Chilean case study, for every meeting, for every email, for every word of encouragement, for helping me solve every problem before it even manifests.... The list is endless. The world needs more people like you, and I am so incredibly thankful to have worked with you for the last four years. There really are not words. Thank you.

This manuscript is dedicated to
Andy Corkhill and Nancy Cook Dorris, both of whom have guided me from the next life.
Thank you for everything.

TABLE OF CONTENTS

LIST OF TABLES.....	xi
LIST OF FIGURES.....	xiv
ABSTRACT.....	xv

Chapter

1. INTRODUCTION	1
1.1 Introduction	1
1.1.1. The Puzzle	3
1.1.2. Motivations of Research	4
1.1.2.1.Theoretical Research into the Politics of Language	4
1.1.2.2. Language and Indigenous Representation in Latin America	6
1.1.3. Research Questions, Objectives, and Significance	8
1.2. Key Theoretical Concepts and Contributions	10
1.2.1. Why Language in Latin America Matters	12
1.3. Overview of Dissertation Research Design, Data and Methods	14
1.4. Chapter Outlines	20
1.4.1. Chapter Two	20
1.4.2. Chapter Three	23
1.4.3. Chapter Four	27
1.5. Looking Forward	29
2. THE GOOD FIGHT: INDIGENOUS POLITICAL SOVEREIGNTY AS A MEANS FOR GUARANTEEING AND ADVANCING INCLUSIVE LANGUAGE EDUCATION IN LATIN AMERICA	31

2.1.	Abstract	31
2.2.	Introduction	32
2.3.	Extant Literature	35
2.3.1.	Understanding Education in Context: Post-Colonial Latin America and the Multilingual Question	35
2.3.2.	Domestic Political Determinants of Indigenous Language Education and Indigenous Language Protection	38
2.3.3.	Intercultural Bilingual Education as a Problem Identifier or a Problem Solver?	43
2.4.	Theory	46
2.5.	Research Design, Hypothesis, and Variables	49
2.5.1.	Sample and Dependent Variables	50
2.5.2.	Independent Variables	52
2.5.3.	Control Variables	55
2.5.4.	Modeling Approach	57
2.6.	Results	59
2.6.1.	Robustness	67
2.7.	Conclusion	70
3.	MORIBUND: EXPLORING THE RELATIONSHIP BETWEEN FOREIGN DIRECT INVESTMENT AND INDIGENOUS LANGUAGE EROSION IN LATIN AMERICA	73
3.1.	Abstract	73
3.2.	Introduction	74
3.3.	A Theory of FDI Inflows and Indigenous Language Usage	79
3.3.1.	Indigenous Language Politics in Latin America	80
3.3.2.	FDI in Latin America	81
3.3.3.	The National Politics of Language	83
3.3.4.	FDI and Language: A Direct Link	84
3.3.5.	FDI Inflows and Indigenous Minority Languages: Hypothesis	90
3.4.	Empirical Context: Language Usage in Latin America	90
3.5.	Research Design	96
3.5.1.	Sample and Dependent Variable	96

3.5.2.	FDI as the Independent Variable	98
3.5.3.	Controls	100
3.6.	Statistical Models	102
3.6.1.	Sensitivity Tests	109
3.7.	Conclusion and Discussion	111
4.	THE PUEBLO ORGANIZES ALONE AND WITHOUT PARTIES: INDIGENOUS LANGUAGE AND SYMBOLIC RESOURCE SOCIAL MOVEMENTS IN LATIN AMERICA	114
4.1.	Abstract	114
4.2.	Introduction	115
4.3.	Protests in Latin America: An Overview	118
4.3.1.	Sources of Indigenous Mobilization	119
4.3.2.	Indigenous Protest Effectiveness	124
4.3.3.	Symbolic Resources and Language in Indigenous Protest	126
4.4.	Theoretical Framework	127
4.5.	In Cold Blood: The Council of All the Mapuche Land	133
4.5.1.	Using the Chilean Case Study to Understand Protests in Latin America	133
4.5.2.	A Brief Historical Overview of the Mapuche-Chilean State Relationship	134
4.5.3.	Protest and Language in Mapuche Land	136
4.6.	Quantitative Analysis	142
4.6.1.	Data and Methods	142
4.6.2.	Sample and Dependent Variable	142
4.6.3.	Independent Variables	146
4.6.4.	Control Variables	149
4.6.5.	Statistical Models	151
4.7.	Results	152
4.7.1.	Robustness Assessments	156
4.8.	Conclusion	158

5. CONCLUSION	163
5.1. Thesis Summary	163
5.2. Academic and Policy Implications	168
5.3. Limitations and Shortcomings	172
5.4. Looking Forward: Future Research	174
REFERENCES	179
Appendices	
A: SUPPLEMENTAL MATERIALS FOR CHAPTER 2	205
B: SUPPLEMENTAL MATERIALS FOR CHAPTER 3	221
C: SUPPLEMENTAL MATERIALS FOR CHAPTER 4	243
D: PERMISSIONS.....	251

LIST OF TABLES

Table 2.1: Random Effects Negative Binomial Count Models of Indigenous Language Speakers.....	62
Table 2.2: Fixed Effects Negative Binomial Count Models of Indigenous Language Speakers	63
Table 3.1: Negative Binomial Count Regression Models of Number of Indigenous Language Speakers	104
Table 4.1: Country-Month Linear Models of Government Protest Responses for Latin America, 1995-2018	154
Table A.1: Summary Statistics for Latin American Sample, 1997-2016	205
Table A.2: Random Effects Negative Binomial Count Models of Indigenous Language Speakers, Alternative Measures for Educational Expenditure	206
Table A.3: Fixed Effects Negative Binomial Count Models of Indigenous Language Speakers, Alternative Measures for Educational Expenditure	208
Table A.4: Random and Fixed Effects Negative Binomial Count Models of Indigenous Language Speakers, Alternative Democracy Control	209
Table A.5: Random Effects Negative Binomial Count Models of Indigenous Language Speakers, Using Vote-Based Indigenous Sovereignty Rights Component	210
Table A.6: Fixed Effects Negative Binomial Count Models of Indigenous Language Speakers, Using Vote-Based Indigenous Sovereignty Rights Component	211
Table A.7: Random Effects Negative Binomial Count Models of Indigenous Language Speakers, Using Special Constituency (SC) – based Indigenous Sovereignty Rights Component.....	212
Table A.8: Fixed Effects Negative Binomial Count Models of Indigenous Language Speakers, Using Special Constituency (SC) – based Indigenous Sovereignty Rights Component	213

Table A.9: Random Effects Negative Binomial Count Models of Indigenous Language Speakers, Using Political Administrative Divisions (PAD) – based Indigenous Sovereignty Rights Component	214
Table A.10: Fixed Effects Negative Binomial Count Models of Indigenous Language Speakers, Using Political Administrative Divisions (PAD) – based Indigenous Sovereignty Rights Component	215
Table A.11: Random Effects OLS Regression Models of Indigenous Language Speakers	216
Table A.12: Fixed Effects OLS Regression Models of Indigenous Language Speakers	217
Table A.13: Random Effects Poisson Regression Models of Indigenous Language Speakers	218
Table A.14: Fixed Effects Poisson Regression Models of Indigenous Language Speakers	219
Table A.15: Fixed Effects Negative Binomial Regression Models of Indigenous Language Speakers Including Both Country and Year Fixed Effects	220
Table B.1: Variable Sources and Descriptions	227
Table B.2: Summary Statistics	231
Table B.3: Linear Regression Models with Logged Dependent Variable	233
Table B.4: Negative Binomial Count Regression Model with Non-Logged Control Variable	234
Table B.5: Negative Binomial Count Regression Model with Lagged Dependent Variable.....	235
Table B.6: Poisson Count Regression Model	237
Table B.7: Negative Count Regression Model with English-Language Control	238
Table B.8: Year Fixed Effects	239

Table B.9: Negative Binomial Count Regression Model with Three-Year Moving Averages	240
Table B.10: Bilateral FDI from Spanish/Portuguese Source Countries	241
Table B.11: Bilateral FDI from Non-Spanish/Portuguese Source Countries	242
Table C.1: Summary Statistics (Main Variables)	243
Table C.2: Country-Month Linear Models of Government Protest Response for Latin America, 1995-2018, Controlling for Year Fixed Effects	244
Table C.3: Country-Month Linear Models of Government Protest Response for Latin America, 1995-2018, Controlling for Month Fixed Effects	245
Table C.4: Country-Month Linear Models of Government Protest Response for Latin America, 1995-2018, Using Logged Indigenous and National Language Speaker Controls	246
Table C.5: Country-Month Linear Models of Government Protest Response for Latin America, 1995-2018, Using Geographic Protest Intensity as Opposed to Protest Intensity	247
Table C.6: Country-Month Linear Models of Government Protest Response for Latin America, 1995-2018, Using Protest Attention as Opposed to Protest Intensity	248
Table C.7: Country-Month Linear Models of Government Protest Response for Latin America, 1995-2018, Excluding Uruguay.....	249
Table C.8: Country-Month Linear Models of Government Protest Response for Latin America, 1995-2018, with Alternate Democracy Control	250

LIST OF FIGURES

Figure 2.1: Marginal Effect of Primary Education Spending on Indigenous Language Speakers, with 95% Confidence Intervals	65
Figure 2.2: Marginal Effect of Secondary Education Spending on Indigenous Language Speakers, with 95% Confidence Intervals	67
Figure 3.1: Predicted Effect of FDI on Indigenous Language Usage	108
Figure 4.1: Marginal Effect of Protest on Government Response, As Moderated by Indigenous Language Diversity	156
Figure B.1: Raw Excel Data for Belize’s Languages in 2017	223

ABSTRACT

Contemporary politics and fluid international relations are fundamentally reshaping Latin America from both inside and out. From extensive foreign investments and rejection of neoliberal intervention to student protests and new waves of democratization and economic development, Latin America has never been so important to study. While many of these trends are positive in the aggregate, previous evidence suggests that the indigenous communities of Latin America may not only be left out of these positive developments but may also in fact experience a number of newfound challenges with profound consequences. How have contemporary politics and international relations affected indigenous communities in Latin America?

To answer this question, this dissertation project fundamentally studies contemporary asymmetric power relations between indigenous communities and other politically relevant actors in Latin America. These relations are considered in the context of *indigenous languages*, and in relation to how power dynamics influence the rights, representation, and preponderance of speakers of indigenous languages in Latin America—as well as the politics of language more generally. The primary aim of this project is to identify and explain the ongoing processes that perpetuate the asymmetry between government and indigenous groups across Latin America.

My dissertation demonstrates evidence for the adverse effects of contemporary international relations and domestic politics on indigenous language and indigenous rights in Latin America. Yet, I also identify several important political factors that offset these

trends in the areas of indigenous sovereignty rights and indigenous protest movements. Altogether, these findings have thereby helped to identify and explain the political factors that can perpetuate or offset power asymmetries between governments and indigenous communities across Latin America.

Chapter 1

INTRODUCTION

1.1. Introduction

Contemporary politics and fluid international relations are fundamentally reshaping Latin America from both inside and out. From extensive foreign investments and rejection of neoliberal intervention to student protests and new waves of democratization and economic development, Latin America has never been so important to study (Konora and Wei, 2014; Yoshioka, 2010; Carrión, 2021). While many of these changes are positive in the aggregate, previous evidence suggests that the indigenous communities of Latin America may not only be left out of these positive developments but may also in fact experience a number of newfound challenges with profound consequences. How have contemporary politics and international relations affected indigenous communities in Latin America?

To answer this motivating question, this dissertation project fundamentally studies contemporary asymmetric power relations between indigenous communities and other politically relevant actors in Latin America. These relations are primarily considered in the context of *indigenous languages*, and in relation to how power dynamics influence the rights, representation, and preponderance of speakers of indigenous languages in Latin America—as well as the politics of language more generally. The primary aim of this project is to identify and explain the ongoing processes that perpetuate the asymmetry between government and indigenous groups across Latin America. Thus, my central

research question for this dissertation is: what (domestic and international) mechanisms compel and maintain the asymmetrical cultural power relationship between the indigenous peoples of Latin America and other actors?

This project is divided into three core substantive chapters, in addition to this introduction and a brief conclusion. Together these chapters provide a synthesis, theoretical framework, and analysis of (1) how domestic and international factors contribute to the protection and expansion of indigenous language rights in Latin America and (2) how indigenous social movements can effectively address these dual challenges in contemporary times.

Overall, this dissertation project leverages quantitative and qualitative methods locate and explain the causal mechanisms behind the asymmetry that exists between indigenous-language speakers and other actors. While existing research touches on some of these mechanisms, none of the existing literature has done so with comprehensive attention to indigenous languages, specifically, nor has it integrated the domestic *and* international political factors outlined above. Furthermore, what literature is available on these topics tends not to be Latin American-focused. This dissertation hence provides a novel understanding of these factors and a deeper contextualization and evaluation of the successes, failures, and broader strategies that Latin American indigenous social movements have seen in trying to address these issues collectively. As a result, this project contributes to the fields of comparative politics and international relations by furthering our understanding of indigenous cultures in Latin America, the erosion of language, and the real-world effects of national and international policy and investment.

1.1.1. The Puzzle

As we see these fundamental reshaping of Latin America, we must consider both contemporary politics and fluid international relations. While many of these changes are positive in the aggregate, such as increased levels of democratization and overall macro-economic development, (Hale and Xu, 2016; Johnson, 2006), previous evidence suggests that the indigenous communities of Latin America may not only be left out of these positive developments, but may also in fact experience a number of newfound challenges with profound intense consequences (José Quirog, 2017; Cárdenas Neira, Cabalin, and Montero, 2017; Kaplan, 2016). This project seeks to explore how contemporary politics and international relations have affected indigenous communities in Latin America. To this end, I ask the overarching research question: what unique challenges have indigenous groups faced as a result of contemporary political processes in Latin America?

To answer this motivating question, this dissertation project investigates these asymmetric power relations between indigenous peoples and other politically relevant actors in Latin America. These relations are primarily considered in the context of *indigenous languages*, and in relation to how power dynamics influence the rights, representation, and preponderance of speakers of indigenous languages—as well as the politics of language more generally (Liu, 2017; Liu and Pizzi, 2016; Liu, 2011). The primary aim of this project is to identify and explain the political drivers that perpetuate and potentially exacerbate this asymmetry across Latin America from a post-colonial perspective. The remainder of this introduction section unpacks these insights in terms of (i) the motivators for this research, (ii) a general understanding of the importance of

indigenous language in Latin America, (iii) my research questions, objectives, and significance.

In light of this motivating question outlined further above, this dissertation project focuses on three primary characteristics of, and/or contributors to, existing power imbalances between Latin American indigenous groups and other actors. These will each be discussed in their own chapter. The first examines domestic contributors to power imbalance in the form of indigenous language education policymaking and implementation as they relate to indigenous political sovereignty. The second examines international contributors to power imbalance in the form of the negative impacts of FDI on indigenous language usage. Finally, the third focuses the interplay between indigenous languages and indigenous protest as a means of addressing this power imbalance. Before turning to a summary of these chapters in further detail, I briefly elaborate upon the core motivations for this dissertation below.

1.1.2. Motivations for Research

1.1.2.1. Theoretical Research into the Politics of Language

As alluded to above, this dissertation explores the recognition, protection, cultivation, and usage of language, which underpins virtually all shared interactions in contemporary society. The justification for using language as a lens through which to understand indigenous cultures as a whole is simple. Societies, groups, and individuals communicate through business transactions, knowledge transfer, emotions, and opinions – both political and apolitical – all by using one or more languages. It thus follows that

something so pervasive has overt political underpinnings, which can be explored in this dissertation project (Liu and Pizzi, 2017).

Because political decisions cannot be made without language as a centerpiece, it is often these political decisions that protect or destroy minority languages¹. In addition to its relevance to the discipline of political science, the study of this relationship between government and minority languages has both normative and policy-relevant implications. Those speaking minority languages suffer the consequences of living in societies built on power imbalances, facing political discrimination and marginalization, difficulty accessing government resources, and an essentialized existence (Warren and Jackson, 2004; Langer and Muñoz, 2003). Evidence suggests that this plight of minority languages is both widespread and growing. Indeed, over half of the world's languages are estimated to be dead or dying, and the downward trend is projected to continue (Noble Wilford, 2007; Yoshioka, 2010). Moreover, recent reports suggest that these pressures are particularly acute for indigenous languages across the globe (Yoshioka, 2010).

Of particular interest to understanding the preservation of minority languages are the drivers behind why societies choose to communicate using one language over another, or to learn fluency in more than one language (i.e., becoming bilingual or multilingual). These decisions are complex, often interacting and reshaping government policies with academic experts, local with national, and minority groups with other minority groups (Garcia, 2003; Henze and Davis, 1999; Hornberger and King, 1996;

¹ I define minority language as one that is not spoken by the majority of a nation's population *or* one that is not protected as an official state language. This includes sign languages (University of Gothenburg, 2018).

Stroud, 2011). Many existing studies of minority language choice focus on post-colonial states, particularly in Africa, since there remains the influence of the colonizers' language in government and inter-governmental relations (Easterly and Levine, 1997; Stroud, 2011; Bates, Coatsworth, and Williamson, 2007). However, there is a surprising lack of focus on language choice, protection, and usage in Latin America. This is consistent with broader recognition of Latin America being relatively understudied as a region within global social science research (Warren and Jackson, 2004; Langer and Muñoz, 2003). Notwithstanding this relative inattention, Latin America represents an ideal focus for assessment of the research questions posed in this dissertation. Indeed, with its early decolonization, numerous indigenous populations, and mixed history with capitalism, Latin America presents unique challenges and opportunities when understanding language in the post-colonial context.

With these points in mind, I now turn to a brief overview of the importance of language and indigenous representation in Latin America. This is followed by a more detailed accounting of the research questions and research significance of this dissertation.

1.1.2.2. Language and Indigenous Representation in Latin America

This dissertation is motivated by the clear and persistent imbalance of power that indigenous communities live with every day in most – but not all – Latin American countries. Both the nuanced differences between countries and within countries lend themselves to immensely powerful questions about how and why particular people and groups remain in power, what makes a successful challenge to that power, and even how

we understand power hierarchies on an international scale. Throughout this research project, I explore, and argue for, the significance of a deeper understanding of asymmetry in Latin America. I permeate my work with an interrogation of the causes of its perpetuation because that is truly the crux of this dissertation project. It is as Gordon and Weber (2007) argue the importance of a post-colonial lens:

Capitalist imperialism is rooted in the logic of a socioeconomic system that is driven by the competitive pursuit of profit based on the exploitation of labour, and which is prone to over-accumulation. Capital, backed by state power, pursues a spatial fix to resolve the systematic crisis of over-accumulation. The creation of new spaces of accumulation is not an innocuous process; it inevitably involves the forceful and violent reorganisation of peoples' lives as they are subordinated to the whims of capital. Strategies of accumulation by dispossession by capital therefore commonly spawn popular resistance from the affected communities. (p. 63)

Understanding the relationship between post-colonialism and the social structures of our society – in particular, on marginalized communities – is critical to ameliorating this asymmetry. This research aims to better understand the political dynamics perpetuating this system of oppression in Latin America. To this end, this dissertation project extends, improves, and contributes to existing research on indigenous politics in Latin America through a detailed quantitative and qualitative analysis. Past research has explored many facets of indigenous politics in Latin America, from a variety of perspectives. Scholars have, for example, studied economic and income disparities (Kaplan, 2016; Konora and Wei, 2014; Schneider, 2013; Bates, Coatsworth and Williamson, 2007), access to governmental resources (Langer and Muñoz, 2013; Van Cott, 1995), indigenous representation in government (Vogt, 2016; Van Cott, 1995; Van Cott, 2005; Warren and Jackson, 2004), and access to and control over natural resources (Simmons 2016; Simmons 2016b; Kronik and Verner, 2010; Raftopoulos and Morely, 2000), only to name some of

the stellar pre-existing research. The work that comes before this dissertation project has made excellent strides in understanding the asymmetry that characterizes much of the indigenous-governmental relationship in Latin America; I hope to expand upon this research.

1.1.3. Research Questions, Objectives, and Significance

Building off the motivating question outlined earlier, the central research question for this dissertation is: what (domestic and international) mechanisms compel and maintain the asymmetrical cultural power relationship between the indigenous peoples of Latin America and other actors? In order to best explore this overarching research question, this three-article dissertation project is divided into three core substantive chapters, in addition to an introduction that contains a generalized literature review about the status of indigenous peoples in Latin America, my conclusion, and an appendix detailing my novel time-varying indigenous language dataset and corresponding data coding and data collection efforts. Together these chapters provide a synthesis, theoretical framework, and analysis of (1) how domestic and international factors undermine and complicate the politics of indigenous language rights in Latin America and (2) how indigenous social movements can effectively address these dual challenges in contemporary times.

As I explore more below, there are a series of sub-questions that are related to my central dissertation question. Because I proceed with a three-article approach to this dissertation, each set of sub-questions relates to a different causal mechanism, or to a different series of causal mechanisms, that compel and maintain this asymmetrical cultural

power relationship between the indigenous populations of Latin America and other governmental and societal actors. Accordingly, subsets of these sub-questions are separately considered in each of my three primary empirical chapters. To foreshadow these sub-questions, chapter 2 primarily asks: (1) To what extent are indigenous languages in Latin America protected? (2) What explains the variation in effectiveness that is observed in indigenous language education efforts across Latin America? Likewise, chapter 3 poses the central question: what is the relationship between FDI inflows and indigenous languages in Latin America? Finally, Chapter Four asks: what explains this contradiction between expectations and outcomes in cross-language indigenous protest and mobilization in Latin America?

In light of the above questions and sub-questions, this dissertation project speaks to a variety of structural societal problems such as access to government resources, economic mobility within the state, and government responses to protests. However, my primary objective is to conduct social science research into the drivers and implications of these societal problems, not to solve them with any sort of sweeping policy suggestions. The latter would be a disservice to the unique situation of each individual country, and, perhaps even more importantly, each individual indigenous community. Instead of crafting advocacy-focused policy solutions that would do a disservice to these peoples, this project intends to explore the causal mechanisms behind this asymmetry in the knowledge that understanding the root causes may someday lead to clearer solutions.

This next section below outlines my key theoretical concepts, highlighting the framework upon which this work is built. This includes highlighting some of the key

overarching literature, although chapter-specific literature is presented in each respective section later on in this dissertation. The next section below also highlights how my dissertation project fits into some existing bodies of literature, but, more importantly, weave them together in a novel way with my unique dataset. Following this, I turn to a more detailed overview of my dissertation's research design, data, and methods.

1.2. Key Theoretical Concepts and Contributions

Political decisions cannot be made without language as a centrepiece (Liu, 2011). As noted above, this dissertation project seeks to understand the overarching asymmetrical power relationship between indigenous populations and their governments in Latin America, particularly in the context of indigenous language usage. In order to execute this analysis, I use a holistic sociopolitical-economic framework, a novel *Ethnologue* dataset (described below), and a series of cross-national quantitative regression analyses and comparative cases. In each of these respects, this dissertation project considers and then leverages indigenous political sovereignty, minority languages at the local and state levels, indigenous (language) education and pedagogy, indigenous language heterogeneity and diversity at the state and local levels, and changes in language over time. These key concepts are utilized throughout my dissertation project to contribute to my commentary on asymmetry in Latin America.

Through engagement with existing literatures on language, as well as several broader literatures on indigenous groups in Latin America, this research develops and confirms several hypotheses, discussed below, concerning this asymmetrical power

relationship between indigenous groups and their governments in Latin America since the early 1980s. Accordingly, this dissertation project rigorously evaluates existing perceptions and conceptualizations of indigenous language usage in Latin America, particularly highlighting the potentially negative effects of education policy, international economic flows and investments, and the active usage and protection of indigenous languages.

This dissertation project likewise builds on existing work on the politics of language, indigenous rights movements, and post-colonialism in Latin America literature. That being said, this project is the first of its kind to build a series of theoretical frameworks with empirical evidence that combines these overarching topics. This research also serves as a springboard to further research – not just on the specific relationships between these Latin America countries, their indigenous populations, and indigenous language usage, but on the greater problems of asymmetry that persist between indigenous peoples and their governments around the world. To this end, and as will be elaborated upon in the conclusion, the theoretical framework of this dissertation demonstrates the potential for future applications in other regions, at least in part. Indeed, future research could leverage and extend this dissertation’s findings not only to related issues of representation in Latin America, but to issues of minority language rights and representation across the world. These points are elaborated up in the conclusion to this dissertation.

1.2.1. Why Language in Latin America Matters

Latin America is a rich region for both linguistic and comparative political economy analysis due to high levels of ethnic and racial diversity, and the aforementioned post-colonial contextualization (Jackson and Warren, 2005; Howard, De Pedro Ricoy and Andrade Ciudad, 2018). Based on a 2010 census, approximately 42 million indigenous peoples live in Latin America, accounting for around 8% of the region's total population (The World Bank Group, 2015). Yet, indigenous populations in Latin America are currently confronted with a number of significant challenges to the maintenance of their languages and cultures. McCarty and Nicholas (2014) suggest, for example, that indigenous languages have been declining in Latin America due to extreme historical marginalization of indigenous peoples and their languages, as well as explicit monolingual or bilingual federal bills. Yoshioka (2010) points to neoliberalism squeezing out indigenous language education in Mexico and Guatemala due to its inefficiency as compared to Spanish and English. In part due to these trends, a large literature researching the politics of Latin America's indigenous groups' fights for rights and representation has emerged (Graham in Warren and Jackson, 2004; Konora and Wei, 2014; Selmier and Oh, 2013; de la Torre, 2013; Lehoucq, 2020).

In Latin America, this communal fight for political, economic, and social representation and equality has hinged, in large part, around indigenous populations' conceptualization and uniqueness of their own indigenous identities (Jackson and Warren, 2005; McCarty, 2003). Although with varying degrees of success, indigenous movements have lobbied their local and national governments on the preservation and usage of

indigenous languages as a comparatively easy way to ensure that the next generation of indigenous peoples remain connected to their culture (Jackson and Warren, 2005; McCarty, 2003; Gal, 1989).

This is all to say, understanding indigenous languages in Latin America is a gateway to understanding indigenous socioeconomic and political struggles as a whole. It is as McCarty argues: “The loss of a language reflects the exercise of power by the dominant over this disenfranchised, and is concretely experienced ‘in the concomitant destruction of intimacy, family and community’” (2003, p. 149). In this sense, McCarty highlights the deeply entrenched nature of language in understanding exactly how politics play out. She contends that the loss, and by extension, the protection of, languages can make or break entire communities.

Furthermore, understanding indigenous languages in Latin America provides insight into the broader post-colonial forces that are at play in these countries (Gordon and Weber, 2007). The persistent and oftentimes negative effects of colonialism in Latin America permeate government and community strategies about how to best prioritize and protect these languages (Gordon and Weber, 2007; Enrique López in Hornberger, 2008). Indigenous language politics in Latin America are hence a window into understanding this greater asymmetry. As such, this dissertation contributes to the broader political science literature on the contemporary implications of post-colonialism within Latin America and elsewhere (Hardt and Negri, 2000; Fanon, 1968; Ashcroft, B., Griffiths, G. and Tiffin, H., 2013; Amin, 1976; Hendrickson, 1994; Said, 1978; Williams and Chrisman, 1994; Woddis, 1967).

1.3. Overview of Dissertation Research Design, Data, and Methods

This dissertation project leverages quantitative and qualitative methods to both isolate and evaluate the drivers of existing asymmetries between indigenous language speakers and other actors within Latin America. Recall that while existing research touches on some of these mechanisms, none of the existing literature has done so with comprehensive attention to indigenous language, specifically, nor has it integrated the domestic *and* international factors outlined above. As noted above, what literature is available on these topics tends not to be Latin American-focused. This dissertation hence provides a novel understanding of these factors. Relative to past work, it also provides a deeper contextualization and evaluation of the successes, failures, and broader strategies that Latin American indigenous social movements have seen in trying to address these issues collectively. As a result, this project contributes to the fields of comparative politics and international relations by furthering our understanding of indigenous politics in Latin America, the erosion of language, and the real-world effects of national and international policy and investment.

Although each chapter merits a unique set of statistical and case study analysis, recall that the overarching goal of this dissertation is to identify the political factors that perpetuate the existing asymmetric relationship that exists between the indigenous-language speakers of Latin America and other actors. Because of this identification of political processes, the statistical analysis throughout this dissertation is reliant on a variety of tests and quantitative modelling techniques. These include (depending on the analysis) negative binomial count models, country and/or period fixed or random effects, first

differencing, and interactions. Alongside these statistical innovations, case-based (qualitative) evidence is leveraged in several instances.

For the quantitative component of this dissertation project, I have manually collected the core dataset that is necessary for my quantitative analyses. This dataset is focused on measuring time varying indigenous language usage rates across Latin America. I then leverage these language data for several components of my other two empirical dissertation chapters. Accordingly, and throughout my dissertation, I draw my linguistic proficiency standards from the *Ethnologue* database. *Ethnologue* is a dataset that tracks all seven thousand living languages (Anon, *Ethnologue: Languages of the World*). It has over eighty years in time series data, although it does not collect data annually, nor has it always released new data annually (Anon, *Ethnologue: Languages of the World*). As of 2022, *Ethnologue* is in its twenty-fourth edition (Anon, *Ethnologue: Languages of the World*). This implies 21 unique time points over the 1953-2019 period of coding, with the data being coded at roughly five-year intervals until 2014 and annually thereafter.

In order to build the dataset used in this project, I collated data from 20 countries (Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Uruguay, and Venezuela) in the following years: 1988, 1992, 1996, 2000, 2005, 2009, 2014, 2015, 2016, 2017, and 2018. This in turn serves as dataset, allowing me to analyzing changes in indigenous (and non-indigenous) language usage across Latin America's countries for the 1988-2018 period. It is with these data that I am able to evaluate my dissertation's theoretical contentions (presented further below) concerning the eroding

effects of international economic flows on indigenous language usage in Latin America, the interplay between indigenous language usage and education policy, and the potential role of indigenous language diversity within the context of indigenous protests. Before turning to these theoretical contentions, some further defense of the *Ethnologue* data that is used in this dissertation is warranted.

Unfortunately, there is no perfect measure of language usage – in Latin America or globally. Existing measures come from datasets that are often outdated or do not fully capture the nuance of indigenous language usage, especially over time. The most advanced, and only time varying measure of spoken languages by country to date is that of Liu and Pizzi (2016). In brief, Liu and Pizzi (2016) sought to re-conceptualize and re-code our understanding of language as a cultural marker. Existing databases are static (i.e., time invariant) (Anon, 1964; see: Easterly and Levine, 1997; Wimmer, Cederman, and Min, 2009; La Porta et al., 1999). Liu and Pizzi correctly state that language is often the definitive, salient ethnic marker; however, the reality remains that many people are bilingual, and that “individuals – regardless of their ethnic identities – interact in the official state language, economic exchanges” (2016, p. 955). The current measures of language usage – and, in particular, ethnolinguistic fractionalization – do not fully take these people into account because they categorize them in constrictive, binary categories of speaking the state language (rarely indigenous languages) or not speaking it at all. Liu and Pizzi also argue that too much weight is given to language as a cultural marker (2016, p. 957).

There are costs and benefits to using *Ethnologue*. The benefits are extensive: the data stretches back into the 1950s, giving access to an expansive amount of temporal

variation in indigenous language usage for my dependent variable. *Ethnologue* tracks all known languages, including ones that are extinct or dormant (Anon, *Ethnologue: Languages of the World*). This is particularly important when studying Latin America, as the primary dependent variable for this chapter is variation in indigenous languages; *Ethnologue* collates data on more than just the national and/or official languages. *Ethnologue*'s collection of data on minority languages is more extensive and specific than many other datasets. By contrast, the aforementioned "big three" databases focus more on ethnic identities and ethnolinguistic fractionalization measures rather than the languages themselves. In sum, then, *Ethnologue* can be argued to most effectively capture my languages of interest while concurrently providing extensive temporal coverage.

Nevertheless, problematic elements exist within the *Ethnologue* data. Even when *Ethnologue* began releasing data annually in 2014, its compilers often drew upon the same sources that were used in coding prior years. That is, numbers of language speakers were not always precisely updated every year, even if a new edition of *Ethnologue* is available. Consequently, there is less temporal variation than there would be in an ideal dataset. *Ethnologue* is also run by SIL international, which is a religious organization involved in missionary work (Anon, 2018). This could potentially undermine the objective qualities of *Ethnologue*, as SIL could have ulterior motivations beyond the academic or theoretical measurement of spoken language. However, these concerns are mitigated by the third-party source materials mentioned above. *Ethnologue*'s language records are mostly curated and assembled from academic sources, rather than from missionaries working in

the field². This helps to offset any concerns of *Ethnologue*'s broader agenda biasing its measurement of language usage, as in this case it leverages more objective sources for the actual task of measurement. It simply compiles these records into the most comprehensive aggregate measures of language usage for each country and language over time – so as to provide interested parties with the most accurate records of language usage across the world.

In sum, *Ethnologue* presents the best available raw data in terms of (indigenous) language disaggregation and temporal variation with which to work. Its time-varying country-by-country breakdown and classification system allows me to measure the prevalence and variation of individual languages speakers across countries and over time, rather than relying upon variation in only official or national languages, or variation in ethnic population numbers (or ethnolinguistic fractionalization). Based upon these qualities, I manually coded every single indigenous language record for every time point of interest across 20 countries in Latin America for the 1988-2018 time period, from *Ethnologue*'s original printed source material. As aforementioned, these coding details appear below and in Appendix B. My analyses then often focus on country-period counts of indigenous (and non-indigenous) language speakers, as well as measures of indigenous language diversity at the country-period level.

Throughout this dissertation, several other datasets supplement *Ethnologue*, as indigenous language usage only serves as one key (typically dependent) variable in my dissertation analyses. These additional datasets vary by chapter but include several

² Although there are instances where SIL is the only organization to have measured a specific language.

prominent datasets and data coding efforts. In Chapter Two, I use several of the World Bank's World Development Indicators (The World Bank Group, 2015), including educational spending at the primary and secondary level. I also utilize a political sovereignty variable derived from the Inter-American Development Bank and qualified by the World Bank's World Development Indicators. In Chapter Three, I use a host of related variables from the Quality of Governance project's standard dataset (Teorell et al., 2019), including one that quantifies my Foreign Direct Investment variable, as well as many of my control variables. In Chapter Four, I leverage several variables from the Integrated Crisis Early Warning System (hereafter ICEWS) event dataset (Boschee et al., 2015), including a self-created government protest-response variable and a country-month protest variable.

With these research design, datasets and methods contributions in mind, I now turn to a more detailed outline of the core empirical chapters of my dissertation. These ensuing chapter outlines add further detail and context to each of the points outlined in this section and in the previous sections of this introduction.

1.4. Chapter Outlines

1.4.1. Chapter Two: The Good Fight: Indigenous Political Sovereignty as a Means for Guaranteeing and Advancing Inclusive Language Education in Latin America

My second Chapter takes a deep dive into one of the most visible and quantifiable areas of asymmetry in indigenous relationships in Latin America. This chapter studies the contingent effects of indigenous political sovereignty *and* education policy on indigenous

language maintenance in Latin America. This research is motivated by the following two sub-questions: (1) To what extent are indigenous languages in Latin America protected? (2) What explains the variation in effectiveness that is observed in indigenous language education efforts across Latin America? This chapter expands extant literature concerning indigenous education in Latin America by exploring cross-national variation in indigenous education policies. Of particular interest is primary and secondary education—especially in terms of national governments’ policies towards funding and supporting bilingual education at these education levels throughout Latin America. I argue that countries that delegate relatively high levels of political sovereignty to their indigenous populations are more likely to see broad-based educational investments slow, stop, or even reverse indigenous language erosion. I use qualitative evidence and cross-national statistical analyses in order to offer a qualified degree of support for these theoretical contentions. Thus, this chapter provides novel theoretical insights, and empirical evidence, concerning the domestic political determinants of indigenous language education and indigenous language protection.

As noted above, this chapter’s theoretical motivation draws heavily upon a series of ongoing education challenges faced by indigenous groups in Latin America. To this end, the World Bank’s *Indigenous Latin America in the Twenty-First Century* Report suggests that indigenous language education in Latin America is “fact highly irregular and unsystematic” (2015, p. 87) with up to “95 percent of all illiterate indigenous persons above 10 years of age...speak[ing] their native language”³ (2015, p. 87). As reviewed further in

³ This statistic is specifically in reference to Bolivia

this chapter, there is also substantial variation across Latin American countries with respect to (indigenous language) education, serving as a highlight for the domestic variation and asymmetry in the region. As such, and as noted in the paragraph immediately above, this chapter seeks to evaluate the following questions. First, I interrogate to what extent are indigenous languages in Latin America protected? Second, I ask what explains variation in the effectiveness of indigenous language education efforts across Latin America. I provide theoretical and empirical assessments of these questions with an eye towards understanding the importance of indigenous political sovereignty for indigenous language education. Building on existing literatures concerning indigenous education policy in Latin America, I explore cross-national variation in indigenous sovereignty rights *and* national education policies and relate this variation to indigenous language maintenance.

To achieve the aims outlined above, my chapter provides a comprehensive review of the domestic political determinants of indigenous language education and indigenous language protection. Alongside this, I also highlight why, and argue that, education is the most important factor to consider when studying the domestic politics of language. Without nationally supported education policies that directly address indigenous language protection and cultivation, many already in-danger languages have little structural support (Graham in Warren and Jackson, 2004; Enrique López in Hornberger, 2008; Enrique López in Cortina, 2014). I also postulate that education policies demonstrably cue which languages state agencies value and/or view as legitimate over others (as alluded to in Enrique López in Hornberger, 2008). This chapter then builds upon several existing quantitative analyses of national language/education policies (Liu, 2017; Liu and Pizzi,

2016; Liu, 2011) to perform a comprehensive quantitative assessment of the *domestic* determinants of indigenous language maintenance in Latin America, giving special attention to primary and secondary education policy *and* indigenous political sovereignty.

My theoretical contentions and case-based evidence begin by focusing on primary schools that teach bilingually. My quantitative analyses then broaden this focus to consider national governments' domestic policies towards funding and supporting primary and secondary education throughout Latin America. Through these analyses, this chapter provides a critical and comprehensive review of the domestic political determinants of indigenous language education and indigenous language protection using a mixed methods approach. In quantitatively testing the hypothesis that countries with an increased amount of political sovereignty for their indigenous populations are more likely to see broad-based educational investments slow, stop, or even reverse indigenous language erosions, I find support for the importance of indigenous political sovereignty in ensuring that education policies help, rather than harm, indigenous language maintenance in Latin America.

My quantitative analysis specifically considers the interaction of indigenous political sovereignty and national educational investments as explanatory factors for cross-national variation in indigenous language maintenance at the country-year level. Across a wide variety of model specifications, I find evidence in support of the moderating role played by these former variables. More specifically, I find that increases in educational spending at the primary or secondary level tend to be associated with negative or null effects on indigenous language maintenance within countries exhibiting low indigenous political sovereignty. However, these same increases in educational spending instead have

increasingly positive (albeit moderate) effects on indigenous language maintenance within countries exhibiting high indigenous political sovereignty. When it comes to the role of educational investments in helping or hurting indigenous language maintenance in Latin America, these results accordingly suggest that indigenous political sovereignty matters. This finding has important policy implications for the design and implementation of primary and secondary education policies in Latin America: educational investments and broader (non-educational) domestic policies towards indigenous political rights and freedoms must go hand in hand if the former is to maintain or improve, rather than harm, indigenous language education in Latin America.

1.4.2. Chapter Three: Moribund: Exploring the Relationship between Foreign Direct Investment and Indigenous Language Erosion in Latin America

My third Chapter focuses on a more international rather than domestic asymmetry, which in this case is rooted in economic disparity. Extant research has shown that national language policies can attract foreign direct investment (FDI), and that potential FDI-host countries coordinate their domestic language policies in anticipation of this. While the increased FDI-inflows arising from such language policies may benefit some members of society, these shifts in policy can adversely affect those whose spoken languages are not perceived as beneficial for attracting FDI inflows – primarily indigenous language speakers. This third Chapter develops a theoretical framework to suggest that FDI inflows have contributed to declines in the usage and protection of indigenous languages in recent decades. This chapter's hypothesis is tested on a country-year sample of Latin American

countries for the period 1988-2018. This chapter finds that FDI is determined to be a statistically significant contributor to the decline of indigenous language usage in contemporary Latin America.

As noted, although foreign direct investment (FDI) can have – and has had – some positive effects on the region (see generally: Hale and Xu, 2016; Johnson, 2006), indigenous and other marginalized peoples oftentimes find it difficult to overcome the barriers that FDI also places in their path (José Quirog, 2017; Cárdenas Neira, Cabalin, and Montero, 2017; Kaplan, 2016). As multinational corporations (MNCs) increase their FDI inflows in the region, their influence on creating new government policy⁴, ability to circumvent existing policies, and effects on the daily lives of their host country increase (José Quirog, 2017; Schneider, 2013; del Valle, 2014; Fuentes and Pipkin, 2015). Although MNCs rarely overtly target minority and/or indigenous populations through explicit anti-indigenous labor laws or the like, these groups are often disproportionately affected by MNC policies (del Valle, 2014). MNCs in Latin America have purchased unprotected indigenous land, polluted and destroyed indigenous resources, and worsened working conditions for indigenous and other peoples (Schneider, 2013; del Valle, 2014; Anon, 2012; José Quirog, 2017).

Given the broader systemic effects of FDI and MNCs on indigenous rights in Latin America, there are reasons to suspect that FDI will have an especially pernicious effect on the usage and support for indigenous languages within these countries in particular. In this

⁴ I define government policy as a law, proposed agenda, or other government endorsement of an action that is directly related to an issue of public interest (University of Gothenburg, 2018).

chapter, I therefore pose the question: what is the relationship between FDI inflows and indigenous languages in Latin America? This question examines the potential for synergistic benefits of country-language policies in ways that are amenable to FDI forces, as well as the documented adverse consequences of these same policies on indigenous populations (José Quirog, 2017; Cárdenas Neira, Cabalin, and Montero, 2017). The latter adverse effects of FDI on indigenous languages are puzzling when juxtaposed against the broader development narrative, which argues that increasing economic development should improve the welfare of minority groups globally, across many dimensions. Yet, indigenous language speakers are seeing more harm than good in their levels of linguistic protection, despite the broader benefits of economic development (Liu and Pizzi, 2016; Kim et al., 2015).

In my third Chapter, I hypothesize that there is a negative relationship between FDI inflows and the usage of indigenous languages in Latin America. I specifically argue that FDI inflows have the potential to *negatively affect* the usage of indigenous languages, highlighting the extreme asymmetry that exists between the powerful MNCs and the indigenous populations of Latin America. Stated briefly, the logic to this argument is as follows: MNCs prioritize markets with shared or common languages, as such markets minimize communication and related transaction costs. Through both lobbying and social learning, Latin American governments recognize this reality. This in turn leads these governments and societies to craft policies that prioritize the usage and normalization of international languages such as Spanish, Portuguese, and English in schools, businesses, and homes to maximize the domestic economic activities that encourage or maintain high

FDI inflows. Over time, such policies and inflows lead indigenous language speakers to deprioritize the usage of indigenous languages, in favor of Spanish, Portuguese, or English. This leads to a negative association between FDI inflows and the number of indigenous language speakers within Latin American countries.

Because existing data on language usage patterns is either time-invariant or insufficient for disaggregated analysis of indigenous languages, this Chapter draws upon my aforementioned data from *Ethnologue* to develop a novel measure of changes in indigenous languages across Latin American countries over time. The chapter then uses a series of negative binomial count models to evaluate the relationship between past FDI inflows and contemporary indigenous language usage for all Latin American countries, 1988-2018. The results of these models and their corresponding robustness tests indicate that FDI inflows has a statistically significant negative effect on indigenous language usage in Latin America. This confirms, at a cross-national level, that increases in FDI inflows are associated with a consistent decline in the rates of indigenous language speakers in Latin America during this thirty-year time period. International MNCs perpetuate the asymmetrical relationship between indigenous people and their government through their FDI in Latin America.

1.4.3. Chapter Four: The Pueblo Organizes Alone and Without Parties⁵: Indigenous Language and Symbolic Resource Social Movements in Latin America

The fourth Chapter of my dissertation considers the implications of the asymmetries discussed in the previous two chapters. The staggering diversity of indigenous languages in Latin America may imply to some that indigenous language diversity serves as a barrier to effective indigenous protest. Indeed, extant political protest literature suggests that cooperation, mobilization, coordination at the group (Vogt, 2016; Kingstone, Young, and Aubrey, 2013), interpersonal (Fisher, 1994), and societal (Yashar, 2005; Sieder, 2002) levels can be impeded by primary language differences among relevant groups and individuals. Yet, when looking across past indigenous language protests and social movements in Latin America, the most successful by far have been transnational and multi-language movements such as the indigenous fight for cultural autonomy in Chile. Therefore, this chapter asks the question: what explains this contradiction between expectations and outcomes in cross-language indigenous protest and mobilization in Latin America?

My fourth Chapter leverages a symbolic resource framework to answer this very question. Through an illustrative case and quantitative tests, this chapter more specifically evaluates the hypothesis that indigenous protestors that exhibit more diversity in indigenous languages and cultures involved in said protests will improve the effectiveness and success rates of their protests. The results of both the qualitative and quantitative analyses in this chapter yield new insights into the relationship between indigenous

⁵ The title from this chapter comes from an interview by Simmons (2016).

language users in Latin America and the effectiveness of protests involving diverse indigenous participation in the region. This chapter accordingly addresses the final component of the dissertation, as outlined further above, with respect to how indigenous language speakers can effectively address the power asymmetries between their governments and their peoples.

As noted above, the theory for this chapter engages with symbolic resource theory. It is well established, both by my definition and extant ones, that language is a symbolic resource. Indeed, Breton (1984) argues that language is critical to understanding the concept of symbolic resources: “I wish to isolate language as a component of the symbolic order, because of its particular significance in multilingual societies. Language, of course, is a means of communication and as such is part of the instrumental culture. But it is also a critical component of the symbolic culture since it constitutes a basis for defining collective identities and lifestyles” (p. 126). Language is a central part of identity and is a resource for forming and protecting culture. Extant literature also extensively demonstrates that symbolic resources serve as a facilitator for protests, both in Latin America and elsewhere (Davis, 1999; Bomberg and McEwen, 2012; Pfaff and Yang, 2001). Symbolic resources, including environmental and immaterial resources (such as language) inspire protests, especially when threatened (Simmons 2016a; Simmons 2016b, Mische, 2008).

This chapter includes case-based evidence to evaluate the empirical applicability and soundness of my theoretical framework. In this vein, I explore the micro foundations of indigenous protests via the illustrative case of Chile in the wake of the Pinochet regime.

I also conduct a cross-national quantitative analysis, which enables me to test my hypothesis at a fine-grained temporal level, across all of Latin America, and with highly granular data on protest actions and government responses to those actions. My quantitative analysis ultimately shows that my hypothesis about the role of indigenous languages is indeed supported. Accordingly, this chapter develops and confirms the hypothesis that indigenous protestors that use their shared indigenous language experiences as a unifying factor will improve the effectiveness and success rates of their protests. My argument introduces a novel lens through which to view protest, by centering language as a deciding factor in the success and effectiveness of protests in Latin America, while also expanding and critiquing existing theories of protest success and effectiveness. As I further elaborate upon in the conclusion to this dissertation, this finding has implications for our understandings of patterns of indigenous representation across Latin America, as well as for future research into the role of linguistic heterogeneity in politics.

1.5. Looking Forward

This dissertation project concludes with a final chapter that includes a summary of the key concepts and questions discussed in these three chapters. In my conclusion chapter, I also discuss the primary policy implications of my dissertation project, as well as some of the limitations of a project of this scope. Finally, I put forwards some suggestions for the important future research that hopefully continues on well after this project.

As such, this dissertation contributes to the broader political science literature on the contemporary implications of post-colonialism within Latin America and elsewhere

(Hardt and Negri, 2000; Fanon, 1968; Ashcroft, B., Griffiths, G. and Tiffin, H., 2013; Amin, 1976; Hendrickson, 1994; Said, 1978; Williams and Chrisman, 1994; Woddis, 1967).

In brief, my conclusion notes that this dissertation project speaks to a variety of literatures, and furthermore has many academic and policy implications because of this. I discuss the potential policy implications that nations could implement to slow, stop, or reverse indigenous language erosion in Latin America. My conclusion also provides a brief summary and synthesis of my Chapters. Finally, I conclude by outlining a number of key suggestions for future research, drawing upon the advances that this dissertation has thus far provided. Some of these suggestions include new literatures that could be incorporated, as well as new variables that could strengthen the arguments presented in this dissertation.

Chapter 2

THE GOOD FIGHT: INDIGENOUS POLITICAL SOVEREIGNTY AS A MEANS FOR GUARANTEEING AND ADVANCING INCLUSIVE LANGUAGE EDUCATION IN LATIN AMERICA

2.1. Abstract

This Chapter studies the contingent effects of indigenous political sovereignty *and* education policy on indigenous language maintenance in Latin America. This research is motivated by the following two sub-questions: (1) To what extent are indigenous languages in Latin America protected? (2) What explains the variation in effectiveness that is observed in indigenous language education efforts across Latin America? To answer these questions, this Chapter builds on existing literature concerning indigenous education in Latin America, specifically exploring cross-national variation in indigenous education policies. Of particular interest is primary and secondary education—both in terms of primary and secondary schools that teach bilingually and in terms of national governments’ policies towards funding and supporting bilingual education at these education levels throughout Latin America. I contend that countries that delegate relatively high levels of political sovereignty to their indigenous populations are more likely to see broad-based educational investments slow, stop, or even reverse indigenous language erosion. Qualitative evidence and cross-national statistical analyses offer a qualified degree of support for these theoretical contentions. As such, this Chapter provides novel theoretical insights, and empirical evidence, concerning the domestic political determinants of indigenous language education and indigenous language protection.

2.2. Introduction

The World Bank's *Indigenous Latin America in the Twenty-First Century* Report suggests that indigenous language education in Latin America is “fact highly irregular and unsystematic” (2015, p. 87) with up to “95 percent of all illiterate indigenous persons above 10 years of age...speak[ing] their native language”⁶ (2015, p. 87). There is extreme variation in Latin America when considering indigenous language education. To what extent are indigenous languages in Latin America protected? What explains variation in the effectiveness of indigenous language education efforts across Latin America? This Chapter provides theoretical and empirical assessments of these questions, with an eye towards understanding the importance of indigenous political sovereignty for indigenous language education. Building on existing literatures concerning indigenous education policy in Latin America, I explore cross-national variation in indigenous sovereignty rights *and* national education policies and relate this variation to indigenous language maintenance.

My analyses in these respects focus on primary and secondary schools that teach bilingually, and on national governments' policies towards funding and supporting primary and secondary education throughout Latin America. Through these analyses, this Chapter provides a critical, comprehensive review of the domestic political determinants of indigenous language education and indigenous language protection. In quantitatively testing the hypothesis that countries with an increased amount of political sovereignty for their indigenous populations are more likely to see broad-based

⁶ This statistic is about Bolivia.

educational investments slow, stop, or even reverse indigenous language erosions, I find support for the importance of indigenous political sovereignty in ensuring that education policies help, rather than harm, indigenous language maintenance in Latin America.

To achieve the aims outlined above, this Chapter first provides a comprehensive review of the domestic political determinants of indigenous language education and indigenous language protection. Alongside this, I also highlight why, and argue that, education is the most important factor to consider when studying the domestic politics of language. Namely, without nationally supported education policies that directly address indigenous language protection and cultivation, many already in-danger languages have little structural support (Graham in Warren and Jackson, 2004; Enrique López in Hornberger, 2008; Enrique López in Cortina, 2014). Furthermore, I argue that education policies demonstrably cue which languages state agencies value and/or view as legitimate over others (as alluded to in Enrique López in Hornberger, 2008). This Chapter then builds upon several existing quantitative analyses of national language/education policies (Liu, 2017; Liu and Pizzi, 2016; Liu, 2011) to perform a comprehensive quantitative assessment of the *domestic* determinants of indigenous language maintenance in Latin America, giving special attention to primary and secondary education policy *and* indigenous political sovereignty.

My quantitative analysis specifically considers the interaction of indigenous political sovereignty and national educational investments as explanatory factors for cross-national variation in indigenous language maintenance at the country-year level. Across a wide variety of model specifications, I find evidence in support of the moderating role

played by these former variables. More specifically, increases in educational spending at the primary or secondary level tend to be associated with negative or null effects on indigenous language maintenance within countries exhibiting low indigenous political sovereignty. Yet, these same increases in educational spending instead have increasingly positive (albeit moderate) effects on indigenous language maintenance within countries exhibiting high political sovereignty. When it comes to the role of educational investments in helping or hurting indigenous language maintenance in Latin America, these results accordingly suggest that indigenous political sovereignty matters. This finding has important policy implications for the design and implementation of primary and secondary education policies in Latin America: educational investments and broader (non-educational) policies towards indigenous political rights and freedoms must go hand in hand if the former is to maintain or improve, rather than harm, indigenous language education in Latin America.

The remainder of this Chapter proceeds as follows. In the next section, I review and synthesize the existing literatures on (indigenous and bilingual) education policy in Latin America. This is to then arrive at my theory and hypothesis concerning the joint importance of education policy and indigenous political sovereignty in indigenous language education, and by consequence, indigenous language maintenance. I next provide details on the data and research design that I use to test my hypothesis. Following this, my results section models the interactive effects of education spending and indigenous political sovereignty upon country-year indigenous language maintenance with a series of cross-national negative binomial regression models using both random and fixed effects. My findings

imply that in the relatively common scenario where indigenous political sovereignty is non-existent, per student educational expenditures have a negative effect on a country's number of indigenous language speakers. However, and most importantly for my interactive hypothesis, the effects of per student educational expenditure become positive and statistically significant within country-years that exhibit higher levels of indigenous political sovereignty. This implies that educational expenditure has the potential to improve, rather than harm, indigenous language maintenance in Latin America when indigenous political sovereignty is high. My conclusion elaborates upon these findings.

2.3. Extant Literature

2.3.1. Understanding Education in Context: Post-Colonial Latin America and the Multilingual Question

After centuries of colonization, the indigenous peoples of Latin America were left in a situation somewhat unique to the more “traditional” post-colonial plight in other former colonized countries across the rest of the world (Grey Postero and Zamosc, 2006; Warren and Jackson, 2004). Latin America's colonialization had largely ended over a century before the more commonly discussed post-World War II decolonization period, but the strides made to build and rebuild most of Latin America were riddled with problems (Grey Postero and Zamosc, 2006; Warren and Jackson, 2004). Rather than another century of healing and inclusive nation-building for the indigenous populations, a general trend in the Latin American decolonization era demonstrates a perpetuation of the European-imposed, race-and-ethnicity-based hierarchies (Langer and Muñoz, 2003; Warren and

Jackson, 2004). That is, under many of the newly formed nations after decolonization in the nineteenth century, indigenous populations remained not only disenfranchised, but also fully excluded from participating in many parts of society, including access to government, education, and voting rights (Warren and Jackson, 2004). Indigenous peoples in Latin America faced harsh socioeconomic and political discrimination and were even killed⁷ in the century and a half that followed Latin American decolonization (Warren and Jackson, 2004).

Repeated and increasingly dangerous levels of exclusion over that time period led the indigenous peoples of Latin America and their activist leaders to increasingly advocate for indigenous language education in their primary and secondary schools to reclaim their culture long marginalized, ramping up in the 1970s in many Latin American countries (Vigouroux, 2011; Hornberger and King, 1996; Stroud, 2011). Indigenous leaders in Bolivia and Chile began to fight for more language rights in schools as early as the 1970s (Webb, 2013; Grisaffi, 2019). In general, the 1990s were crucial for indigenous populations in Latin America and elsewhere: after the UN began pushing for the protection of indigenous cultures worldwide, indigenous activists began petitioning their governments for recognition and protection (Jackson and Warren, 2005; McCarty, 2003). To this end, many activists have argued that a focus on protecting language rights is inherently tied to the protection of rights in other areas of daily life (Diaz Fouces, 2005). Education – and specifically indigenous language education – was key in propelling the indigenous rights

⁷ Graham (in Warren and Jackson, 2004) specifically refers to the tragic massacre against the Yanomami peoples of Brazil, who were murdered in 1993 by illegal mineral mining prospectors who were on Yanomami protected territory.

movement in the 1990s and beyond because it was a concrete demand specifically aimed at protecting and uplifting the erosion of indigenous cultures (Graham in Warren and Jackson, 2004; Hornberger, 1998; Enrique López in Hornberger, 2008).

Anecdotal evidence supports the contentions outlined above. Webb (2013), for example, points to the efforts of the Mapuche peoples (and related indigenous groups) to address indigenous education in Chile: “Indigenous populations suffer marked educational differentials from non-indigenous dominant groups, who claim descent from European settlers in the same districts and are among those most likely to repeat academic years, enter school late, and have among the lowest retention figures. Since the return to democracy, efforts have been made to address this achievement gap via reform programmes ... However, these reforms acknowledged nothing of the cultural or linguistic needs of indigenous peoples themselves. By failing to acknowledge the multicultural makeup of its citizens, education has therefore become a contested space in which recognition of indigenous rights – and cultural and linguistic diversity in particular – have been negotiated” (p. 320).

This is consistent with the broader literature on the importance of cultural and language-specific education access for minority rights and recognition (Graham in Warren and Jackson, 2004; Enrique López in Hornberger, 2008; Enrique López in Cortina, 2014). Education is the primary route through which minority language speakers worldwide have attempted to protect and grow their languages (Hornberger and King, 1996; Liu, 2011).

The past literature that addresses routes through which minority language speakers have attempted to protect and use their indigenous languages outside of education is

relatively new. There are two points of focus in the extant literature. The first is on regime types (e.g., democracies' treatments of minority languages versus authoritarians' treatments of minority languages) (Safran and Liu, 2012; Liu, 2011; Liu, Gandhi, and Bell, 2018). The second is on indigenous language use in government settings (Hornberger, 2006). However, there still exists disagreement over the cost-benefit analysis of using primary and secondary education as the principal mechanism for language revitalization (Garcia, 2003; Liu, Gandhi, and Bell, 2018; Liu and Pizzi, 2016). Primary and secondary education policies are evidently incredibly complex, and face pressures from a great many internal and external sources. Relying solely on the link between language revitalization and education is a disservice to the complexity of both issues. This Chapter will offer insights into these latter tensions by evaluating a new set of potentially adverse effects of primary language policies on indigenous language usage levels in Latin America.

2.3.2. Domestic Political Determinants of Indigenous Language Education and Indigenous Language Protection

In order to understand the potential for indigenous language revitalization via primary and secondary education in Latin America, it is important to understand generally how education is funded. There is extensive variation in both educational spending and educational policies across the region, with some countries (such as Colombia) standing out as leaders in primary and secondary education, and others (such as Guatemala) falling quite short. Arnove, Franz, and Alberto Torres (2013) suggest that educational outcomes

in Latin America are perpetuated and affected by social, economic, and political inequality.

They argue that education and inequality are inextricably linked:

A struggle is now taking place in Latin America, as elsewhere, as to who will determine the goals, processes, and outcomes of national economic and social policies. The achievement of more equitable development is integrally related to the ability of countries to affirm their national sovereignty as well as their collective interests. To do so requires the joining of likeminded countries to challenge the external constraints imposed upon them not only by the one current superpower, the United States, but also by transnational actors ranging from the international financial, technical assistance, and trade agencies—most recently the World Trade Organization. (Arnove, Franz, and Alberto Torres, 2013, p. 311)

Essentially, Latin American countries that focus their general governmental social policies are closing the gaps of inequality are more likely to place increased funding into education, and/or to provide subsidies for both primary and secondary education at the local, state, and national levels (Arnove, Franz, and Alberto Torres, 2013). These authors also argue that rural, female, and indigeneous populations (as well as other historically marginalized communities) begin their education at the greatest disadvantage, and are less likely to complete their education than their urban, male, non-indigenous counterparts (Arnove, Franz, and Alberto Torres, 2013). In part, they argue, this is due to discrepancies in governmental policies on where funding should be concentrated, and in what languages these policies are accessible (Arnove, Franz, and Alberto Torres, 2013).

Here, it is important to draw attention to the fact that not all languages are created equally. Not belonging to the dominant linguistic group can lead to exclusion from communities, both political and apolitical, through the very practical reason that there is a knowledge gap (Stroud, 2011). Latin America is notably varied in its protection of

indigenous language education programs (Enrique López in Hornberger, 2008), due in part to its need to wrestle with its colonial legacy (Gordon and Weber, 2007). Different colonial and post-colonial experiences led to different indigenous strategies (e.g., top-down or bottom-up) when bargaining for government resources across Latin America (Enrique López in Hornberger, 2008). Indigenous communities and languages consistently seek protection from their domestic governments and from the languages that dominate these domestic contexts. Yet Latin America's national governments deal with indigenous education in demonstrably varied ways. In these contexts, there are several key strategies that national governments adopt when choosing 1) whether to support indigenous language education and 2) if the former, how to implement indigenous language programs (Apfeld and Liu, 2021; Enrique López in Hornberger, 2008).

The broader literature on national language policies offers insights into the pressures that underlie these tradeoffs. Governments tend to promote linguistic homogeneity to create, promote, or enforce nationalism (Chiswick, Patrinos, and Hurst, 2000). Yet at the same time, democratic governments often face pressures to demonstrate that they are providing representation and support to all members of their societies, including non-dominant language speakers (Vogt, 2016). As a result of these dual tensions, there is often a disconnect between what governments say their priorities are in term of education and what actually occurs (Kickham, 2015; Hornberger, 1998). Moreover, even if a government is committed to protecting indigenous languages, there are several challenges, including: how to preserve languages which are in different stages of life and death, how to preserve languages which have no written form, and how to preserve

languages with so many dialects that formally teaching them is a near impossibility (Kickham, 2015; Hornberger, 1998).

Languages with increasingly few speakers pose even greater challenges, as governments and indigenous groups have historically found it difficult to protect indigenous languages with few speakers left due to logistical issues (Graham in Warren and Jackson, 2004; Astor, 2021). For large and diverse majoritarian democratic polities, such as Brazil, protecting one lone Juma speaker to attempt to revive an entire language in an extremely targeted response would be a difficult sell (Astor, 2021). In this sense, governments must grapple with a series of cost-benefit analyses to determine to what extent they are willing to protect indigenous languages (Enrique López in Cortina, 2014).

In part, governments' managements of these competing pressures can play out as a set of countervailing policy priorities. For there to be structural government support for teacher salaries, the writing and printing of materials, and the overall maintenance of the physical properties (Enrique López in Hornberger 2008; Apfeld and Liu, 2021). Educational programs in indigenous languages require high initial investments of government funds, but also need large sums to maintain these structures (Apfeld and Liu, 2021). Thus, indigenous language education serves as a measure to see how much governments are willing to literally invest in their indigenous citizens. On top of the literal costs, governments must also decide to allocate political power to their respective ministry for education (Apfeld and Liu, 2021). As Apfeld and Liu (2021) argue: “[W]hen governments assign a politically influential individual – e.g., the (deputy) prime minister or a respected politician – to oversee the education ministry, this indicates changing

priorities” (p. 2). Because education is often seen in Latin America and elsewhere as a top-down initiative (Enrique López in Hornberger, 2008), it is evident that government allocation of different types of resources. These resources can include money and political power, indicating support in a broader sense of the state’s prioritization of indigenous communities (Enrique López in Cortina, 2014; Hornberger, 1998). Stroud (2001), summarizes the importance of understanding indigenous languages as they relate to the broader community prioritization:

This is one that traces the source of the problems with MT [mother-tongue] programmes into the very social fabric of the postcolonial community itself. It is quite clear that in the majority of cases, the programmes that fail most dismally are those that seek to use the ‘minority’ languages of the most *marginalised* and poverty stricken speakers as media of instruction. Speakers such as these view their languages as dead ends educationally and of little use in official labour markets. Those languages which suffer the greatest lack of materials or appropriate grammars are also the ones that have historically been so insignificant politically so as not to merit any attention from linguists or textbook writers. In other words, we need recourse to a perspective that can accommodate the social distribution of minority language programme failure, and that acknowledges that problems in MT programmes are at bottom problems of deprivation, marginality and poverty of the speakers of the languages. (pp. 340-341)

As I have demonstrated, indigenous language education is an incredibly complex issue that involves extensive government bureaucracy and a multitude of often countervailing policy decisions. Conventional wisdom about intercultural bilingual education suggests that it is one of the most streamlined and effective methods for indigenous language education in Latin America. However, the reality is far murkier than some of the current literature suggests, as will be discussed below.

2.3.3. Intercultural Bilingual Education as a Problem Identifier or a Problem Solver?

Our traditional understanding of the plights of indigenous language education in Latin America is that government-introduced and supported pedagogy can slow, stop, or reverse some of the indigenous language erosion caused by centuries of colonialism, genocide, and neglect. However, this Chapter also seeks to evaluate the indigenous communities' and their governments somewhat tumultuous and widely varied success with the implementation of intercultural bilingual education (*Educación bilingüe intercultural*; hereafter EBI). EBI is one of the most adopted indigenous language education programs in Latin America but has seen incredibly varied success (Enrique López in Cortina, 2014). Also borne of the aforementioned indigenous movements of the 1990s, EBI is a broad series of educational programs focused on the formalized teaching of indigenous languages (Enrique López in Hornberger, 2008; Arnove, Franz, and Alberto Torres, 2013). EBI takes different forms in different countries, ranging from full submersion primary education to enrichment courses (Enrique López in Hornberger, 2008). Thus, it is difficult to offer a neatly synthesized definition of EBI, except to emphasize that EBI is a public education-based push for school-aged students to have a formal education in indigenous languages (Enrique López in Cortina, 2014; Arnove, Franz, and Alberto Torres, 2013 Enrique López in Hornberger, 2008).

However, EBI has presented some significant challenges since states began implementing it decades ago. Enrique Lòpez points to five primary issues around which indigenous community members are now concerned after a long implementation of EBI:

(1) The demand for expansion of EBI [intercultural bilingual education] in a context where, despite the acknowledged government progress in line with the search for equity and cultural relevance, bilingual schools and the intercultural and bilingual approach have not even reached all the rural communities that require this type of service. (2) The call for extending the approach to cities and most heavily populated towns, including capital cities, especially now that the increasing presence of Indigenous populations in urban environments is much more evident, as in, for instance, Mexico City, Lima, Santiago de Chile or even Buenos Aires. (3) The need for Spanish-speaking populations also to benefit from Indigenous bilingual education, so as to become aware of language diversity, learn about the Indigenous languages spoken in their countries and also develop more sensitivity to Indigenous cultures. Indigenous leaders repeatedly state that it will not be possible to eradicate discrimination and racism if the Luso-Hispanic criollo-mestizo population do not change their attitudes towards diversity and difference. (4) The urgency of modifying the official curriculum so that it acknowledges, accepts and includes Indigenous sociocultural practices and ways of life as integral to an alternative knowledge system. (5) The obligation to make decisions and take action toward the rescue and revitalization of endangered and highly vulnerable Indigenous languages. (In Hornberger, 2008, p. 46)

As Enrique López argues, EBI as an overarching government program leaves much to be desired, arguably on the government's side and, even more importantly, on the side of the indigenous community. These successes and flaws indicate that EBI implementation is an excellent way to study indigenous language education policies in a relatively controlled environment (Arno, Franz, and Alberto Torres, 2013). Altogether then, a Latin American country's priorities towards indigenous language education can be seen as a multiplicative combination of its overall commitment to education policy. Its tailoring of components of that policy to indigenous language needs. To this end, attention must be paid to both the design of such policies and allocations, their actual implementation, and the demand for such resources in terms of the indigenous groups and language needs.

In this sense, governments are faced with a series of complex choices when creating indigenous language education policies. The first is choosing a general strategy of education, meaning primarily a choice between top-down and bottom-up approaches. The

former, which is much more common in Latin America, places the governmental education ministry/cabinet position in charge of creating and maintaining the indigenous education language curriculum, teaching practices, physical schools, and the like (Enrique López in Hornberger, 2008). The latter, which is much less common, places the power in the hands of the indigenous populations (Enrique López in Cortina, 2014). Education plans in Latin America are therefore split as Enrique López argues “ministries [top-down] are most generally concerned with pedagogical issues, while grassroots organizations [bottom-up] consider these issues as part of a larger political concern” (in Cortina, 2014, p. 42). Enrique López’s observation segues into the increasingly complex situation: not only do governments have to choose between top-down and bottom-up strategies in the simplest sense but have a host of external pressures with which to contend. Some of these pressures include regime support for the program(s), grassroots organization around the policy(ies), the overall economic health of the education ministry, and the varying levels of heterogeneity present in terms of indigenous communities and their languages (Enrique López in Hornberger, 2008; Enrique López in Cortina, 2014; Chiswick, Patrinos, and Hurst, 2000). This discussion should be framed recalling that much of the indigenous existence has been the indigenous populations *versus* their government, so making these education policies inclusive is delicate (Enrique López in Hornberger, 2008).

Webb sums up this struggle succinctly: “As a political and ideological positioning, IBE in Latin America has at the very least, introduced ‘a new politics of knowledge to the centre of struggles over the state itself’ and has initiated a process of ‘educational decolonisation’. However, as a pedagogical practice, it has in many cases failed to

transition those ideals into the classroom, and, in the majority of cases, remains a compensatory model (rather than one of true dialogue) which the state offers as a controlled space for indigenous ‘inclusion’ (or exclusion) reserved only for appeasing the recognition of cultural diversity” (Webb, 2013, p. 328). She summarizes both the conventional wisdom surrounding EBI and the primary critiques of it.

The above assessment of EBI suggests that while sometimes effective, the institution of indigenous language-focused educational initiatives alone does not guarantee effective indigenous language education and maintenance. Rather, this conversation around the benefits and detrimental pitfalls of EBI lacks the integration of a major variable: sovereignty. In this next section, I discuss the central role that indigenous political sovereignty plays in the potential success of slowing, stopping, or even reversing indigenous language erosion in Latin America.

2.4. Theory

Building from the above literature, I posit that countries that give an increased amount of political sovereignty to their indigenous citizens are more likely to slow, stop, or even reverse indigenous language erosion via their primary education systems in Latin America. The logic behind this argument is relatively intuitive. Indigenous language education is a complex and strongly debated topic, as we saw in the discussion of EBI in the previous section. National-level attempts to dole out policy, money, and other resources related to indigenous language education is highly variable in its success, and

EBI remains problematic in its capacity to truly affect indigenous language speaker levels throughout Latin America, despite its best efforts.

Due to its weaknesses, EBI on its own is insufficient in slowing, stopping, or reversing indigenous language erosion. As we saw in the previous section, simply exploring a top-down or bottom-up approach is also not a sufficient explanation for the success of indigenous language preservation because these approaches still rely heavily on the implementation of EBI or similar programs. One instance where indigenous languages gained some national traction was in Colombia during their 1991 Constitutional reform, wherein extensive sovereignty and discretion was granted to indigenous communities in designing and implementing these educational efforts (1991). Hence, it stands to reason that with the introduction of an indigenous (political) sovereignty variable, the observation variation in (un)successful indigenous language education efforts can be better understood. However, with the introduction of a sovereignty variable, the variation in success of indigenous language programs can be explained.

Sovereignty is a contested concept with many definitions, particularly in the already-fraught post-colonial nations of Latin America (Postero and Fabricant, 2019). For the purposes of this discussion, I define sovereignty in a manner that departs from some of the more traditional (e.g., Foucauldian) understanding wherein sovereignty is the “right to kill” (Postero and Fabricant, 2019). Instead, I define sovereignty as “relations of force but also of contracts or agreements” (Postero and Fabricant, 2019, p. 99; Singh,

2015)⁸ which in the contexts of the political sphere for democracies most often relate to the presence of contracts or agreements guaranteeing a degree of electoral rights, political representation, and electoral autonomy. There is extensive extant literature supporting the idea that increased indigenous sovereignty is a catalyst for positive changes in other areas of indigenous life, including indigenous stewardship over natural resources (Varese, 1996; Posey, 2000), food sovereignty as a way of alleviating malnourishment (Altieri and Nicholls, 2008; McKay et al. 2014), and access to governmental resources (Viatori and Ushigua, 2007).

In the case of indigenous language education, my contention is then that these democratically oriented political sovereignty rights will empower indigenous actors to use democratic institutions to expand and ensure their sovereignty in other areas, such as those related to educational policy and educational delivery. These democratic influences would accordingly affect the nature of education policy and its delivery, thereby enhancing the impact or quality of a given level of educational spending for indigenous peoples, and indigenous language maintenance by consequence.

With this understanding of indigenous political sovereignty and its potential broad-based effects, I accordingly argue that when the state grants increased political sovereignty to their indigenous groups, indigenous peoples can better implement the

⁸ Although this is my theoretical definition of indigenous sovereignty, this does not provide a quantifiable measure of sovereignty. Later in this Chapter, I define indigenous sovereignty as reflecting whether a Latin American country has (i) developed electoral laws and/or procedures with direct reference to indigenous voters, (ii) enacted laws or procedures that reserve legislative seats for indigenous representatives at the local and national levels, and/or (iii) established political-administrative divisions to prioritize special electoral jurisdictions for indigenous groups and peoples (World Bank 2015, pg. 51). This is to quantify sovereignty for my quantitative analysis.

education systems that uniquely benefit their linguistic needs. Therefore, increased political sovereignty for indigenous communities leads to increased sovereignty over education. When such education sovereignty is achieved, existing educational resources can be leveraged and allocated in manners that truly impact indigenous language erosion for the better.

2.5. Research Design, Hypothesis, and Variables

The literature and theoretical discussion outlined above imply that indigenous political sovereignty, when present, will enable indigenous groups to enact sovereignty in other arenas, such as in education policy. When this is achieved, we would anticipate that educational policies and initiatives would better align with indigenous community needs, which include (among other factors) the need for bilingual education and indigenous language maintenance. Such an alignment, when effective, would stand to offset the more common scenario in Latin America of dominant-language educational systems crowding out indigenous (language) education and thus indigenous language maintenance. Thus, indigenous political sovereignty should enhance (i.e., moderate) the effects of extant educational policy—proxied here and below with educational expenditure per person—on indigenous language maintenance in Latin America. This leads to the following testable hypothesis:

H₁: Countries that give moderate to high political sovereignty to their indigenous populations are more likely to slow, stop, or even reverse indigenous language

erosions via their education expenditures than are countries with low or no indigenous political sovereignty.

In referring to indigenous language erosion, this hypothesis evaluates indigenous language speakers as the dependent variable below. This dependent variable is related to the interaction between educational expenditure (per student) and indigenous political sovereignty. Such an assessment is the most apt evaluation that I can undertake with available cross-national data. As such, several of the intermediate steps outlined in my theoretical discussion above remain untested. For instance, although an evaluation of the intermediate decision to adopt more indigenous aligned (e.g., bilingual) education policies and delivery strategies would offer valuable insight into my theory and the overarching questions asked by this dissertation, undertaking this assessment in a cross-national quantitative analysis is infeasible due to a paucity of comparable data on indigenous educational policies across Latin America. Collecting such data remains an important future step in this research agenda. With this caveat in mind, I now turn to my quantitative analysis.

2.5.1. Sample and Dependent Variable

I evaluate my hypothesis using a country-year panel of Latin American countries (excluding the Caribbean⁹) for the years 1997/1998 to 2016. My choice of a 1997/1998-

⁹ I exclude the Caribbean from my analysis because of its unique historical and colonial legacy. For more detailed explanation, see Ellington (2021).

2016 temporal range for this sample is partially due to data availability, especially in relation to several of the educational expenditure measures considered below. In short, the temporal coverage of several of the independent and control variables in my country-year sample of Latin America countries limits my temporal coverage to 1997-2016 (in my smaller model specifications) or 1998-2016 (in my larger model specifications).

The dependent variable for this sample corresponds to a country-year count of indigenous language speakers for each country in Latin America, excluding the Caribbean. This measure was manually derived from the original, raw *Ethnologue*¹⁰ materials in the manner described in Ellington (2021). The use of *Ethnologue* to study countries' variable levels of language prevalence or language usage over time has precedent in past political science research (Liu and Pizzi 2017; Ellington 2021) and allows me to recover finely disaggregated time varying counts of indigenous language speakers for my Latin American countries of interest. These country-year counts combine all indigenous language speakers for each country-year under analysis, and thereby serve as my dependent variable measure of *indigenous language speakers* for all analyses below. As such, I am assuming with this dependent variable that increases (decreases) in *indigenous language speakers* imply more (less) successful indigenous language maintenance efforts. Note that—as discussed in further below—several of my model specifications also control for total population, total non-indigenous language speakers, and/or country fixed effects (among other factors) to further ensure that my inferences with respect to *indigenous language speakers* remain

¹⁰ *Ethnologue* is a dataset that tracks all seven thousand living languages (Anon, *Ethnologue: Languages of the World*).

unbiased with respect to varying population sizes or related within-country characteristics across my Latin American country sample.

The above points notwithstanding, my *indigenous language speakers* measure requires several additional caveats. First, it is worth noting that the underlying *Ethnologue* data used to code this measure was not available annually for all countries in my series during the 1997-2016 period (Anon, *Ethnologue: Languages of the World*). Rather, *Ethnologue* collected data at roughly five-year intervals for 1997-2013 and annually thereafter. For the 1997-2013 window, I accordingly use last-value-carried-forward techniques to fill in intermediate years with *Ethnologue* data for my countries of interest. Second, *Ethnologue* is run by SIL International, which is a Christian organization focused on missionary work (Anon, 2018). The fact that these data were collected by a non-academic organization with its own agenda introduces potential bias in the underlying language rates that *Ethnologue* collects. *Ethnologue* primarily synthesizes existing records and academic data collection efforts on language speakers, rather than collecting these counts itself from missionaries in the field. This helps to counterbalance the potential biases that could be introduced via collection efforts based on the uneven distribution of Christian missionaries in the field. See Ellington (2021) for more discussion of these points.

2.5.2. Independent Variables

Recall that this Chapter's central hypothesis proposed that the (negative or positive) effects of education expenditure on a given Latin American country's number of

indigenous language speakers (i.e., indigenous language maintenance) would be moderated by the levels of overall political sovereignty that a given country grants to its indigenous peoples. Accordingly, I must interact two independent variables to test my hypothesis in my analysis below.

The first independent variable that I consider is a measure of *Primary Educational Expenditure*. For each country-year in my sample, this variable measures the per student average government expenditure on primary education, expressed as a percentage of GDP per capita. Note that in my main analysis tables, I also evaluate an alternate measure of this concept in some models, referred to as *Secondary Educational Expenditure*, which instead captures the per student average government expenditure on secondary education, again expressed as a percentage of GDP per capita for each country-year. The robustness section and appendix also reevaluate my main models when replacing these per student-measures of primary and secondary educational expenditure with simpler measures that merely capture each country-year's (non-per student) expenditure on primary and secondary education as shares of total government spending. In Appendix A, I also test my models with an even simpler measure of each country-year's *total* expenditure on education as a share of total government spending. Each of these measures are derived from the World Bank (2020).¹¹

The second independent variable that I consider is labeled *Indigenous Sovereignty Rights* and is at times abbreviated as *ISR* in the tables below. Indigenous sovereignty is a

¹¹ Note that while these World Bank-measures of educational expenditure represent the best and most appropriate publicly available measures for my hypothesis test, they are missing data for Bolivia and Venezuela during my sample-period. Hence, Bolivia and Venezuela are omitted from all models estimated below.

complex concept that has many different dimensions. The focus of this Chapter is on indigenous sovereignty with respect to the state, and hence political sovereignty. I therefore define indigenous sovereignty according to several of the distinct dimensions of political sovereignty outlined within the “Participation and the Right to Self-Determination” section of the World Bank’s landmark report titled “Indigenous Latin American in the Twenty-First Century: The First Decade” (World Bank 2015). More specifically, I define indigenous sovereignty as reflecting whether a Latin American country has (1) developed electoral laws and/or procedures with direct reference to indigenous voters, (2) enacted laws or procedures that reserve legislative seats for indigenous representatives at the local and national levels, and/or (3) established political-administrative divisions to prioritize special electoral jurisdictions for indigenous groups and peoples (World Bank 2015, pg. 51). Although an ideal measure of indigenous political sovereignty would include a less electorally-based definition of sovereignty, this proxied scale serves as the most complete measure possible given the circumstances.

To create *Indigenous Sovereignty Rights*, I first separately coded whether (=1) or not (=0) each country in my sample enacted each of these three dimensions from the World Bank (2015), which in turn drew upon data from IDB (2015) to construct these respective disaggregated records for each dimension. Given my sample window of 1997-2016, each of my coded component-measures is effectively time invariant for my countries of interest, wherein, as the World Bank (2015) notes: “while the entire region has generated rules that ensure some sort of territorial jurisdiction for indigenous peoples, only eight countries have created laws and procedures for indigenous voters, six reserve seats in local and national

legislatures for indigenous representatives, and only four have changed the political-administrative division of the country to favor special electoral jurisdictions for indigenous peoples” (pg. 51). To then create a single index of *Indigenous Sovereignty Rights*, I calculated the average number (i.e., proportion) of these three sovereignty dimensions that each country-year exhibited for my sample, 1997-2016. Note, however, that I also re-evaluate the robustness of my results when using each binary component of *Indigenous Sovereignty Rights* separately in my robustness section and appendix.

To fully test my hypothesis, I then interact my respective indigenous sovereignty and educational expenditure variables with one another (to create, e.g., *ISR*Primary Ed. Expenditure*). I include this interaction term alongside both constitutive terms within each regression model considered below. This is consistent with Brambor, Clark, and Golder’s (2006) recommendations concerning the proper presentation and interpretation of interaction models. In line with this study, I interpret my table results alongside a series of marginal effects plots to fully evaluate my interaction findings considering my hypothesis.

2.5.3. Control Variables

As alluded to above, my regression models also include a host of control variables. For each specification, I include these control variables in two distinct waves, such that a series of models with a smaller set of control variables retains my full 1997-2016 window of analysis whereas a larger set of control variables leads me to further constrain my analysis window to 1998-2016 due to missing observations on some of my expanded

controls. All control variables are summarized in Appendix A at the end of this dissertation. Starting first with my smaller model specifications, here I first take care to control for the total number of non-indigenous (e.g., Spanish or Portuguese) speakers within a given country, so as to account for the varying degrees to which indigenous speakers are a majority versus minority population within each of my countries. This is done via my coding of non-indigenous speaker countries for my sample's country-years using the same coding process and *Ethnologue* sources described above. I then logged this control variable before its addition to my regression models (as *Ln Non-Indigenous Speakers*).¹² Next, I also include a dichotomous indicator for whether (=1) or not (=0) a Latin American country in my sample was a Spanish colony, which helps me to account for the heterogeneous colonial histories of my sample countries.

My larger specifications then add a series of additional relevant controls to these baseline specifications. Here I first control for a series of economic factors known to affect (changes in) education policy and/or a Latin American country's number of indigenous language speakers (e.g., Lipset 1959; Agenor and Neanidis 2011; Ellington 2021). I specifically include annual controls for logged GDP per capita (*ln GDP pc*), *FDI Inflows* as a percentage of a country's GDP, and *GDP growth*. Each of these controls were obtained from the World Bank's World Development Index (WDI) dataset (World Bank 2020). Next, I add two further (annual) demographic controls via the inclusion of a country's total logged population (*Ln Population*) and *rural population percentage*. Each of these measures were also derived from the WDI dataset (World Bank 2020). Finally, I then

¹² Results are robust when the non-logged version of this measure is instead used as a control.

include one additional political control capturing a country's level of democracy (vs. autocracy) via the inclusion of each country-year's 21-point *Polity IV* score (Marshall, Jaggers, and Gurr, 2018), though note that I also demonstrate the stability of my findings to models that alternatively control for V-Dem's electoral democracy index (Coppedge et al. 2021) in the robustness section and Appendix (pgs. 1-14).

2.5.4. Modeling Approach

My combined dataset corresponds to annual panel data for Latin American countries during the period 1997/1998 to 2006. This relative short time window, and the additional loss of Venezuela and Bolivia due to missingness on my key educational expenditure measures, ensures a relatively small sample size overall (of approximately 300 observations depending on the specification). My *indigenous language speakers* dependent variable in this case is also a count measure, which implies that it is bounded at zero, but able to theoretically take on any positive integer count value. Modeling such a dependent variable with a linear model risks introducing bias, inefficiency, and numeric inconsistencies into my model estimates and ultimate inferences (King 1989). As the summary statistics in the appendix demonstrate, my count dependent variable is also over-dispersed, with an unconditional variance far larger than its mean value.

Considering the above constraints, I model my dependent variable with a series of negative binomial count models within the primary regression analyses presented below. These models appropriately account for the count-based, over-dispersed nature of my *indigenous language speakers* dependent variable at the modeling stage. I then further

account for the panel structure of my data by presenting versions of all models below when separately using country random effects or country fixed effects. The latter models most directly allow me to assess the effects of within country changes in my independent variables upon *indigenous language speakers* over time; whereas the random effects specifications instead allow me to instead compare between-country variation in these respects. That being said, the count-nature of my dependent variable, coupled with the slow-moving nature of this variable and several other measures, and the overall low N, pose several challenges for fixed effects estimation in this context. This leads me to favor the random effects specifications below, though I continue to report both fixed and random effects versions of all main and robustness model specifications.

For both my random effects and fixed effects approaches, I report four specific model specifications. For the first two model specifications in each case, I assess the effects of my *Indigenous Sovereignty Rights* interaction with either (1) *Primary Educational Expenditure* or (2) *Secondary Educational Expenditure* upon my *Indigenous Language Speakers* dependent variable when using the smaller set of control variables mentioned above. I then repeat this setup in the second two model specifications (i.e., under my random or fixed effects setups) to (re)assess the effects of my *Indigenous Sovereignty Rights* interaction with either (1) *Primary Educational Expenditure* or (2) *Secondary Educational Expenditure* upon *Indigenous Language Speakers* when using the larger set of control variables described above. The robustness section then implements a wide variety of alternative model specifications and modeling approaches.

2.6. Results

The primary results of my analyses are presented in Table 2.1 (random effects) and Table 2.2 (fixed effects). I will begin by discussing my main interactive findings jointly for these two tables. This will be followed by a discussion of my statistically significant control variable coefficient estimates in Tables 1-2. Following this, I will turn to a discussion of plotted marginal effects of my main independent variables to evaluate my interactive findings more fully vis-à-vis my primary hypothesis.

Turning to Tables 1-2, the coefficient estimates for my interaction model's components are often statistically significant. Here, I can note further that several of these significant findings are consistent with my theoretical expectations. Across the small and large specifications in Tables 1-2, I find for example that the constitutive terms for *Primary Educational Expenditure* and *Secondary Educational Expenditure* are negative and statistically significant at the $p < 0.10$ or $p < 0.05$ levels in five of my eight specifications.¹³ This implies that in the relatively common scenario where *Indigenous Sovereignty Rights* is zero, per student educational expenditures have a negative effect on a country's number of *Indigenous Language Speakers* (and thus, indigenous language maintenance). However, and most importantly for my interactive hypothesis, the coefficient estimates on the full interaction terms in all eight models are positive and statistically significant. This suggests that this negative effect of educational expenditure stated above (i.e., for countries with no *Indigenous Sovereignty Rights*) is increasingly offset by an additional positive effect of

¹³ The exceptions are the small specification for *Secondary Educational Expenditure* in Table 2.1, and the coefficients for *Secondary Educational Expenditure* and *Primary Educational Expenditure* in the small specifications of Table 2.2. In these cases, the relevant constitutive term's coefficient estimate is negative but not statistically significant.

each type of educational expenditure on *Indigenous Language Speakers* when *Indigenous Sovereignty Rights* grows greater than zero.

The above finding is tentatively consistent with my hypothesis. However, I can note that one possible estimated effect offsetting this potential finding appears to be the coefficient estimates for the *Indigenous Sovereignty Rights* constitutive terms in Tables 1-2, which are consistently negative and statistically significant. For the highly unrealistic condition of a country with zero education spending, this would actually imply that indigenous sovereignty rights reduce *Indigenous Language Speakers*. The plotted marginal effects presented further below will allow me to better assess this potential, and the full net effect of my interactions upon *Indigenous Language Speakers*.

Before turning to my marginal effects plots, I next briefly discuss my control variable findings across Tables 1-2. Aside from one of my eight model specifications, the *Ln Non-Indigenous Speakers* coefficient estimate is intuitively positive and statistically significant at the $p < 0.05$ or $p < 0.01$ levels. This suggests that country-years with higher numbers of non-indigenous language speakers also have higher numbers of indigenous language speakers, all else equal. *Colonial History* (as proxied for by a former-Spanish colony indicator variable) is not reliable in Table 2.1 but is negative and statistically significant in all models reported in Table 2.2. The latter suggests that non-former Spanish colonies (essentially Brazil in this case) have relatively higher rates of *Indigenous Language Speakers*.

The coefficient estimate on *Ln GDP pc* is not consistently significant but does achieve a positive and statistically significant ($p < 0.10$) coefficient estimate in the final

models of Table 2.1 and Table 2.2—implying that more development in these cases may achieve higher numbers of *Indigenous Language Speakers*, all else equal. Controlling for these aforementioned variables, *FDI inflows* is positive and significant ($p < .01$) in the large specifications of Tables 1-2, implying that more FDI correlates with more indigenous language speakers. This finding is contra to Ellington (2021), though this is largely a feature of (i) the annual (as opposed to multi-year lagged average) measure of *FDI inflows* being employed here, (ii) the more constrained country-year sample in this case, and (iii) the fact that the current models more directly account for educational expenditure (a key theoretical mediator in Ellington 2021). As for the remaining controls, the only additional controls that at times achieve statistical significance are *Ln Population*—which is positive and significant ($p < .05$) in Table 2.1 but unreliable or negative and significant in Table 2.2 ($p < .01$)—and *Rural Population Percentage*—which is not-significant in Table 2.1 but is negative and significant in Table 2.2.

Table 2.1: Random Effects Negative Binomial Count Models of Indigenous Language Speakers

	Model 1: Small Primary Ed	Model 2: Small Second. Ed	Model 3: Large Primary Ed	Model 4 Large Second. Ed
Indig. Sovereignty Rights (ISR)	-2.831*** (0.433)	-2.925*** (0.480)	-2.971*** (0.570)	-3.222*** (0.581)
Primary Ed. Expenditure	-0.025* (0.015)	.	-0.030* (0.016)	.
ISR*Primary Ed. Expenditure	0.120*** (0.031)	.	0.126*** (0.031)	.
Secondary Ed. Expenditure	.	-0.013 (0.016)	.	-0.040** (0.019)
ISR*Secondary Ed. Expenditure	.	0.082*** (0.031)	.	0.111*** (0.033)
Ln Non-Indigenous Speakers	0.257*** (0.041)	0.236*** (0.037)	0.177*** (0.049)	0.146*** (0.049)
Colonial History	0.566 (0.925)	0.703 (0.928)	0.916 (1.232)	0.987 (1.217)
Ln GDP pc	.	.	3.526 (3.601)	7.099* (3.779)
FDI Inflows	.	.	0.054*** (0.014)	0.052*** (0.014)
GDP Growth	.	.	0.008 (0.007)	0.005 (0.007)
Ln Population	.	.	0.674** (0.294)	0.705** (0.293)
Polity	.	.	0.030 (0.022)	0.025 (0.022)
Rural Population Percentage	.	.	0.029 (0.027)	0.032 (0.027)
Constant	-0.510 (1.060)	-0.356 (1.051)	-11.931** (6.075)	-12.142** (5.987)
Observations	338	326	297	285
Log-likelihood	-732.6	-723.7	-655.5	-644.0

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 2.2: Fixed Effects Negative Binomial Count Models of Indigenous Language Speakers

	Model 1: Small Primary Ed	Model 2: Small Secondary Ed	Model 3: Small Primary Ed	Model 4: Small Secondary Ed
Indig. Sovereignty Rights (ISR)	20.563*** (5.115)	21.487*** (5.120)	44.584*** (12.973)	50.677*** (13.403)
Primary Ed. Expenditure	-0.026 (0.016)	.	-0.042** (0.017)	.
ISR*Primary Ed. Expenditure	0.137*** (0.031)	.	0.136*** (0.028)	.
Secondary Ed. Expenditure	.	-0.003 (0.019)	.	-0.046** (0.020)
ISR*Secondary Ed. Expenditure	.	0.065** (0.031)	.	0.097*** (0.030)
Ln Non-Indigenous Speakers	0.231*** (0.050)	0.200*** (0.051)	0.110** (0.048)	0.056 (0.050)
Colonial History	-4.153** (1.709)	-4.146** (1.714)	-12.084*** (4.473)	-14.020*** (4.626)
Ln GDP pc	.	.	3.082 (3.872)	7.431* (4.194)
FDI Inflows	.	.	0.058*** (0.015)	0.055*** (0.016)
GDP Growth	.	.	0.001 (0.007)	-0.004 (0.007)
Ln Population	.	.	-1.415 (0.901)	-1.785* (0.927)
Polity	.	.	0.029 (0.020)	0.028 (0.020)
Rural Population Percentage	.	.	-0.129*** (0.047)	-0.151*** (0.050)
Observations	338	326	297	285
Log-likelihood	-691.7	-687.3	-607.9	-601.0

Country Fixed-Effects Included Though Not Reported Here; Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

With the above findings in mind, I now turn to extracting and plotting a series of marginal effects for my key interactive findings. To do so, I follow Brambor, Clark, and Golder (2006) to plot the marginal effect of a change in one of my interactive variables (in my case, *Educational Expenditure*) upon my dependent variable (in my case, *Indigenous Language Speakers*) across the full sample range of my second interaction variable (in my case, *Indigenous Sovereignty Rights*), along with 95% confidence intervals. I extract these marginal effects plots separately for my *Primary Educational Expenditure* and *Secondary Educational Expenditure* interactions and measures, using the full random effects specifications reported in Table 2.1 (i.e., Models 3-4). These plots are respectively reported in Figure 2.1 and Figure 2.2 below. In each case, my marginal effects are derived when holding all other variables to their sample means.

I begin first by interpreting the marginal effects of *Primary Educational Expenditure* and *Indigenous Sovereignty Rights* in Figure 2.1. As alluded to above, Figure 2.1 plots the marginal effect of a one percent increase in *Primary Educational Expenditure* (per student, as a share of GDP) on the expected change in a country's *Indigenous Language Speakers* (y-axis) across the full sample range of *Indigenous Sovereignty Rights* (x-axis). Intuitively, this plot thereby shows the differential output that a country obtains vis-à-vis indigenous language speakers given different levels of existing indigenous sovereignty rights and provisions.

Turning to Figure 2.1, we can first observe that for countries with no *Indigenous Sovereignty Rights*, the estimated effect of an increase in *Primary Educational Expenditure* is negative but not statistically significant at the $p < 0.05$ level (recall that this contingent

effect was negative but only significant at the $p < .10$ level in Table 2.1). However, we can then observe across the x-axis of Figure 2.1 that this same 1% increase in *Primary Educational Expenditure* becomes increasingly positive and statistically significant in its effect on *Indigenous Language Speakers* at higher levels of *Indigenous Sovereignty Rights*—such that for countries with *Indigenous Sovereignty Rights* greater than 0.5, increases in *Primary Educational Expenditure* actually increase, rather than decrease, a country’s number of *Indigenous Language Speakers*. Altogether, these findings accordingly support the hypothesis outlined above, in suggesting that educational expenditures and policy positively (adversely) impact indigenous groups and indigenous language preservation when broader indigenous sovereignty rights exist (are non-existent).

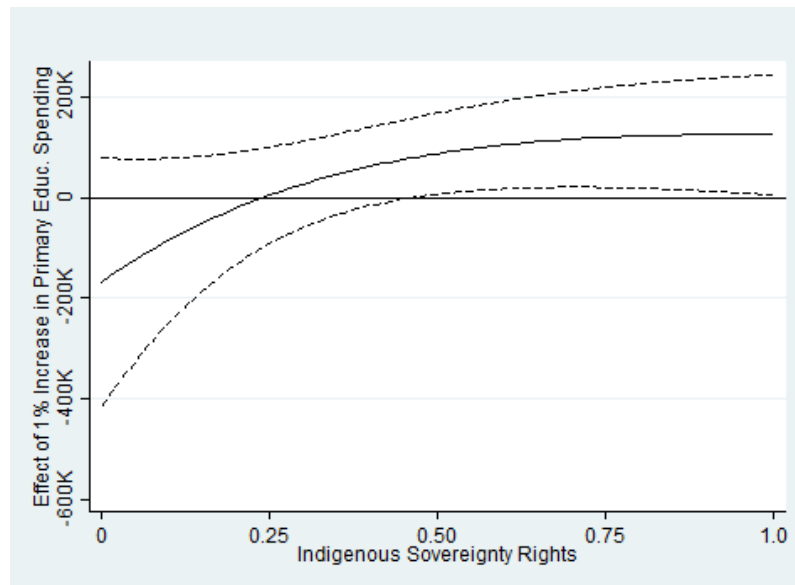


Figure 2.1: Marginal Effect of Primary Education Spending on Indigenous Language Speakers, with 95% Confidence Intervals

I now turn to assess the marginal effects of *Secondary Educational Expenditure* and *Indigenous Sovereignty Rights* on *Indigenous Language Speakers* in Figure 2.2. Similar to my results above, this figure plots the marginal effect of a 1% increase in *Secondary Educational Expenditure* across the sample range of *Indigenous Sovereignty Rights*. Here, we can likewise note that for countries with no *Indigenous Sovereignty Rights*, the estimated effect of an increase in *Secondary Educational Expenditure* is again negative but not statistically significant at the $p < 0.05$ level. That being said, and as was the case in Figure 2.1, Figure 2.2 then demonstrates that the effect of a one percentage increase in *Secondary Educational Expenditure* then becomes increasingly positive and statistically significant in its effect on *Indigenous Language Speakers* at higher levels of *Indigenous Sovereignty Rights*. This effect is weaker both substantively and with respect to reliability, relatively to the case of *Primary Educational Expenditure* above. Yet Figure 2.2 nevertheless demonstrates that for countries with high *Indigenous Sovereignty Rights* (i.e., values greater than 0.75), increases in *Secondary Educational Expenditure* again increase, rather than decrease, a country's number of *Indigenous Language Speakers*. Hence, these findings lend further support to my hypothesis, while also suggesting that the link between educational expenditure, indigenous sovereignty, and indigenous language preservation may be stronger for educational expenditure focused on primary schooling than for educational expenditure focused on secondary schooling.

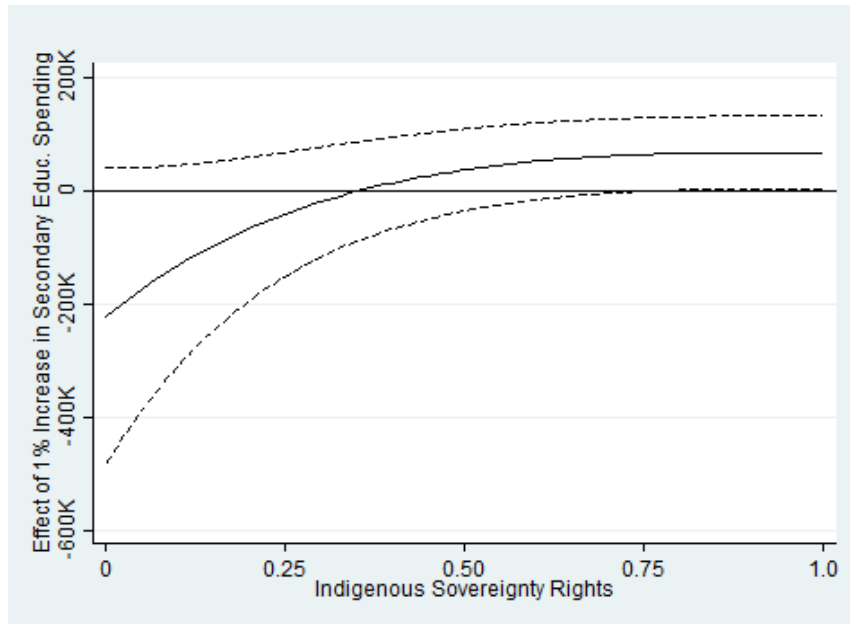


Figure 2.2: Marginal Effect of Secondary Education Spending on Indigenous Language Speakers, with 95% Confidence Intervals

2.6.1. Robustness

The results presented above are robust to a wide array of alternative modeling approaches and model specifications. I illustrate this robustness via the models reported in Appendix A, which continue to report results across all eight (random effects and fixed effects) specifications presented above. Each respective modeling alternative is briefly summarized here. Full tables of model estimates appear in Appendix A and are simply summarized below.

Tables A.2-A.3 demonstrate the robustness of my main findings when one uses alternative measures of educational expenditure in place of the primary two expenditure measures presented above. Specifically, I replace my primary model specifications per student-measures of primary and secondary educational expenditure with three alternative measures. First, I consider two simpler measures of primary and secondary educational expenditure that instead correspond to each Latin American country-year's (non-per student) expenditure on primary and secondary education as shares of total government spending. I then consider an even simpler measure of educational expenditure which in this case corresponds to each country-year's total expenditure on education as a share of total government spending. As above, each of these alternative measures are taken from World Bank (2020).¹⁴ As Tables A.2-A.3 illustrate, my interaction findings for primary education continue to hold across all specifications, though my interaction findings using the alternative secondary education measure are not always statistically significant (especially in Table A.3). The interaction findings for *Total Education Expenditure* are significant in each specification.

I then re-estimate my large (random and fixed effects) specifications from Tables 1-2 when replacing my *Polity* measure of democracy with that of V-Dem's electoral democracy index (*V-Dem EDI*), finding in Table A.4 that my central findings remain when controlling for democracy in this alternative manner.

¹⁴ Note that while these World Bank-measures of educational expenditure represent the best and most appropriate publicly available measures for my hypothesis test, they are missing data for Bolivia and Venezuela during my sample-period. Hence, Bolivia and Venezuela are omitted from all models estimated below.

The next set of robustness tables return to my main measures of *Primary Ed. Expenditure* and *Secondary Ed. Expenditure* but now instead consider alternative operationalizations of my *Indigenous Sovereignty Rights* variable. Recall that my primary *Indigenous Sovereignty Rights* measure was itself a proportion (average) of three separate binary country-year indicators of *Indigenous Sovereignty Rights*: (1) electoral laws and/or procedures with direct reference to indigenous voters, (2) laws or procedures that reserve legislative seats for indigenous representatives at the local and national levels, and (3) political-administrative divisions to prioritize special electoral jurisdictions for indigenous groups and peoples. Tables A.5-A.10 reassess my primary findings when using each of these individual binary indicators in place of my combined index, across all relevant control variable, random effects, and fixed effects specifications. My core findings generally remain statistically significant across these additional specifications and tables, though my findings for the “(1) electoral laws and/or procedures with direct reference to indigenous voters” component to my *Indigenous Sovereignty Rights* index are generally less reliable than the findings for the other two binary components to this index.

Tables A.11-A.12 return to my primary model specifications and illustrate that my key interaction findings remain statistically significant when one alternatively estimates all models using ordinary least squares in place of negative binomial count models. Tables A.13-A.14 then similarly demonstrate that my primary findings hold when one re-estimates all main specifications when using Poisson count models as opposed to negative binomial count models. The former models do not account for the overdispersion in my particular count data, but also are less complex from an estimation standpoint. Finally, Table A.15

revisits my primary fixed effects specifications (i.e., Table 2.1 above) when also including year fixed effects alongside country fixed effects. This allows me to better account for region-wide temporal shocks as well as for potential time dependence in my panel data. I find in this case that my primary results remain when adding year fixed effects. Hence, altogether, the results presented in Tables 1 and 2 above are robust to a wide variety of alternative modeling approaches, although this robustness is slightly more consistent for my primary education measures than for my secondary education measures.

2.7. Conclusion

This Chapter theoretically posited that indigenous political sovereignty will enhance educational expenditure's positive impacts on indigenous language maintenance in Latin America. By contrast, for countries where indigenous political sovereignty is low or absent, educational expenditure was instead anticipated to undermine indigenous language maintenance in Latin America. These expectations were evaluated via a series of country-year panel count models for the years 1998-2006. Across a wide variety of specifications, I find evidence in support of the contentions that (1) educational expenditures undermine indigenous language maintenance in country-years with low to no indigenous political sovereignty but (2) improve indigenous language maintenance in country-years with moderate-to-high political sovereignty. My primary analyses and robustness assessments further suggest that these effects are more reliable and sizable for primary educational expenditure than for secondary educational expenditure. I also identify some evidence to suggest that laws or procedures guaranteeing political seats to indigenous

representatives and laws or procedures prioritizing indigenous political-administrative divisions are the core drivers of my findings for indigenous political sovereignty in these regards, rather than the provision of electoral laws or procedures with direct reference to indigenous voters.

Together, the above findings have several important policy and scholarly implications. For example, my results tentatively suggest that the pathways described above are more effective for primary education rather than secondary education. This reaffirms similar past findings regarding primary (vs. secondary) education for bilingual education (Enrique Lopez in Hornberger, 2008) and suggests that future policy efforts that aim to maintain indigenous languages should focus more so on primary educational resources, expenditure, and delivery than on secondary education. My broadly, my interactive findings also reaffirm past scholars' contentions (Enrique Lopez in Hornberger, 2008; Enrique Lopez in Cortina, 2014; Postero and Fabricant, 2019.) that effective indigenous language education efforts and policies cannot be pursued in a silo, but rather must actively pursue broader indigenous rights and political sovereignty to ensure success. Finally, my disaggregated findings for my *indigenous sovereignty rights* index's components intuitively indicate that national laws that more explicitly provide indigenous community members with guaranteed political representation in legislatures or indigenous political-administrative divisions are more effective in ensuring spillovers in indigenous sovereignty rights to other policy areas (such as education) than are more ambiguous references to indigenous rights in electoral or voting rights laws. The former two areas of

indigenous rights are less common than the latter, suggesting that much work remains to be done in safeguarding indigenous sovereignty across Latin American countries.

The above points notwithstanding, there is also room for improvement in this Chapter's statistical analyses on both methodological and measurement grounds. For example, my current index of *Indigenous Sovereignty Rights* is effectively time invariant and gives equal weight to each of the three components discussed further above (i.e., indigenous voter-tailored electoral laws and/or procedures, local/national laws or procedures that reserve legislative seats for indigenous representatives, and political-administrative divisions that electorally prioritize indigenous groups and peoples). Future extensions of this work should endeavor to measure each of these components at more fine-grained, time varying levels, and could also consider allowing their respective contributions to *Indigenous Sovereignty Rights* to vary according to alternative (theoretically informed) weighting schemes. Likewise, future research should also expand the time analyzed above, especially in the interest of better modeling the time-lag by which *Indigenous Sovereignty Rights* and *Educational Expenditure* may each affect and/or reinforce indigenous language education. At present the country-year results presented above may be overstating (understating) the immediacy (compounding nature) of this effect. Further qualitative analysis could also help to assess this. In the future, this is my next anticipated step in this research agenda.

Chapter 3

MORIBUND: EXPLORING THE RELATIONSHIP BETWEEN FOREIGN DIRECT INVESTMENT AND INDIGENOUS LANGUAGE EROSION IN LATIN AMERICA¹⁵

3.1. Abstract

Past research has shown that national language policies can attract foreign direct investment (FDI), and that potential FDI-host countries coordinate their domestic language policies in anticipation of this. While the increased FDI-inflows arising from such language policies may benefit some members of society, these shifts in policy can adversely affect those whose spoken languages are not perceived as beneficial for attracting FDI inflows – primarily indigenous language speakers. This Chapter develops a theoretical framework to accordingly suggest that FDI inflows have contributed to declines in the usage and protection of indigenous languages in recent decades. This hypothesis is tested on a country-year sample of Latin American countries for the period 1988-2018. In evaluating this hypothesis with the aid of a newly constructed and comprehensive measure of time varying indigenous language usage spanning 20 Latin American countries and 30 years, FDI is determined to be a statistically significant contributor to the decline of indigenous language usage in contemporary Latin America.

¹⁵ This Chapter is derived in part from an article published in *Review of International Political Economy*, Forthcoming, published online 07/26/2021, Copyright Taylor & Francis, available online: <https://doi.org/10.1080/09692290.2021.1948891>

3.2. Introduction

The recognition, protection, cultivation, and usage of language underpins virtually all shared interactions in contemporary society. Societies, groups, and individuals communicate through business transactions, knowledge transfer, emotions, and opinions – both political and apolitical – all by using one or more languages. It thus follows that something so pervasive has overt political underpinnings. These political implications are especially vital to understanding the development and preservation of minority languages (Mufwene, 2008).¹⁶ Because political decisions cannot be made without language as a centerpiece, it is often these political decisions that protect or destroy minority languages. The study of this relationship between government and minority languages has both normative and policy-relevant implications. Those speaking minority languages suffer the consequences of living in societies built on power imbalances, facing political discrimination and marginalization, difficulty accessing government resources, and an essentialized existence. Evidence suggests that this plight of minority languages is both widespread and growing. Indeed, over half of the world’s languages are estimated to be dead or dying, and the downward trend is projected to continue (Noble Wilford, 2007).

Of particular interest to understanding the preservation of minority languages are the drivers behind why populations choose to communicate using one language over another, or to learn fluency in more than one language (i.e., becoming bilingual or

¹⁶ I define minority language as one that is not spoken by the majority of a nation’s population *or* one that is not protected as an official state language. This includes sign languages (University of Gothenburg, 2018).

multilingual). These decisions are complex, often intersecting government with academic experts, local with national, and minority groups with other minority groups (Garcia, 2003; Henze and Davis, 1999; Hornberger and King, 1996; Stroud, 2011). To this end, some scholars characterize language as an inherently political process (Liu, 2011), whereas others have highlighted the role of economic drivers in shaping language adoption at the household and societal levels (Kim et al., 2015; Konara and Wei, 2014). Many existing studies of minority language choice focus on post-colonial states, particularly in Africa, since there remains the influence of the colonizers' language in government and inter-governmental relations (Easterly and Levine, 1997; Stroud, 2011; Bates, Coatsworth, and Williamson, 2007). However, there is a surprising lack of focus on language choice, protection, and usage in Latin America. This stems from Latin America's place as the misfit child of post-colonialism. As elaborated upon below, with its early decolonization, numerous indigenous populations, and mixed history with capitalism, Latin America presents unique challenges and opportunities when understanding language in the post-colonial context.

Although foreign direct investment (FDI) can have – and has had – some positive effects on the region (see generally: Hale and Xu, 2016; Johnson, 2006), indigenous and other marginalized peoples oftentimes find it difficult to overcome the barriers that FDI also places in their path (José Quirog, 2017; Cárdenas Neira, Cabalin, and Montero, 2017; Kaplan, 2016). As multinational corporations (MNCs) increase their FDI inflows in the

region, their influence on creating new government policy¹⁷, ability to circumvent existing policies, and effects on the daily lives of their host country increase (José Quirog, 2017; Schneider, 2013; del Valle, 2014; Fuentes and Pipkin, 2015). Although MNCs rarely overtly target minority and/or indigenous populations through explicit anti-indigenous labor laws or the like, these groups are often disproportionately affected by MNC policies (del Valle, 2014). MNCs in Latin America have purchased unprotected indigenous land, polluted and destroyed indigenous resources,¹⁸ and worsened working conditions for indigenous and other peoples (Schneider, 2013; del Valle, 2014; Anon, 2012; José Quirog, 2017).

Given the broader systemic effects of FDI and MNCs on indigenous rights in Latin America, there are also reasons to suspect that FDI will have an especially pernicious effect on the usage and support for indigenous languages within these countries in particular. Understanding the relationship between FDI and indigenous language usage, particularly in Latin America, speaks to a variety of literatures. Drawing from political science literature on comparative political economy and, more specifically, the political economy of language (Liu, 2011; Liu, Gandhi, and Bell, 2018; Safran and Liu, 2012; Liu and Pizzi, 2016; Kim et al., 2015; Hornberger and Kind, 1996), anthropological literature on indigenous cultures in post-colonial states (Easterly and Levine, 1997; Gal, 1989), and linguistics literature on translation and interpretation (Howard, De Pedro Ricoy, and Andrade Ciudad, 2018), this puzzle of the relationship between FDI and

¹⁷ I define government policy as a law, proposed agenda, or other government endorsement of an action that is directly related to an issue of public interest (University of Gothenburg, 2018).

¹⁸ Including water, soil, and hunting/farming land (José Quirog, 2017; Jackson and Warren, 2005).

indigenous language usage intersects disciplines that work to understand the core question of how humans interact with their environment and vice versa. This relationship between FDI and indigenous language usage draws from the existing literature of so many fields because, at the core of this exploration of FDI and indigenous languages, is a fundamental discussion about power dynamics.

In this Chapter, I therefore pose the question: what is the relationship between FDI inflows and indigenous languages in Latin America? This question examines the potential for synergistic benefits of country-language policies in ways that are amenable to FDI forces, as well as the documented adverse consequences of these same policies on indigenous populations (José Quirog, 2017; Cárdenas Neira, Cabalin, and Montero, 2017). The latter adverse effects of FDI on indigenous languages are puzzling when juxtaposed against the broader development narrative, which argues that increasing economic development should improve the welfare of minority groups globally, across many dimensions. Yet, indigenous language speakers are seeing more harm than good in linguistic protection, despite the broader benefits of economic development (Liu and Pizzi, 2016; Kim et al., 2015).

Drawing on recent research into the comparative political economy of language (Liu and Pizzi, 2016; Kim et al., 2015; Liu, 2011; Konara and Wei, 2014; Safran and Liu, 2012), I hypothesize that there is a negative relationship between FDI inflows and the usage of indigenous languages in Latin America. I specifically argue that FDI inflows have the potential to *negatively affect* the usage of indigenous languages. Stated briefly, the logic to this argument is as follows: MNCs prioritize markets with shared or common languages,

as such markets minimize communication and related transaction costs. Through both lobbying and social learning, Latin American governments recognize this reality. This in turn leads these governments and societies to craft policies that prioritize the usage and normalization of international languages such as Spanish, Portuguese, and English in schools, businesses, and homes to maximize FDI inflows. Over time, such policies and inflows lead indigenous language speakers to deprioritize the usage of indigenous languages, in favor of Spanish, Portuguese, or English leading to a negative association between FDI inflows and the number of indigenous language speakers within Latin American countries. Although this Chapter does not seek to pinpoint individual government policies that deliver the precise mechanism by which this language erosion is propelled, it is important to note the government's role as an active agent in managing this relationship between MNCs and the indigenous populations.

Because existing data on language usage patterns is either time-invariant or insufficient for disaggregated analysis of indigenous languages, this Chapter draws upon data from *Ethnologue* (SIL International 1988-2018) to develop a novel measure of changes in indigenous languages across Latin American countries over time. The Chapter then uses a series of negative binomial count models to evaluate the relationship between past FDI inflows and contemporary indigenous language usage for all Latin American countries, 1988-2018. The results of these models and their corresponding robustness tests indicate that FDI has a statistically significant negative effect on indigenous language usage in Latin America. This confirms, at a cross-national level, that increases in FDI

inflows are associated with a consistent decline in the rates of indigenous language speakers in Latin America during this thirty-year time period.

The remainder of this Chapter proceeds as follows: in the next section, I present my theory of FDI as a potential contributing factor to the decrease in usage of indigenous languages in Latin America. This is followed by a discussion of my data, variables, and empirical research design. I then discuss the results of my primary negative binomial event count models of indigenous language usage in Latin America, as well as a series of relevant robustness tests. Finally, I include a brief conclusion and a discussion of further research.

3.3. A Theory of FDI Inflows and Indigenous Language Usage

Previous studies (notably Kim et al, 2016; Konara and Wei, 2014) have considered FDI as a dependent variable when studying the effects of language usage and language policies on transnational economic inflows. Their common conclusion is that language usage and language policy have the capacity to attract FDI inflows, and that governments do indeed adjust education and language policies to maximize this. Yet, this focus on the beneficial effects of common language on FDI inflows (e.g., Liu and Pizzi, 2016; Kim et al., 2015), ignores the negative externalities of these policies for those languages that have fewer benefits to attracting or supporting international FDI flows, such as indigenous languages in Latin America. This Chapter argues that FDI accordingly has the potential to adversely affect the usage of indigenous languages. In short, FDI inflows will pressure Latin American countries to prioritize Spanish, Portuguese, and even English language policies over policies that are designed to protect or support indigenous language usage.

This negative influence of FDI in-flows, in turn, will have observable implications for actual indigenous language usage rates in Latin America. I elaborate on these mechanisms below.

3.3.1. Indigenous Language Politics in Latin America

Latin America is a rich region for both linguistic and comparative political economy analysis due to high levels of ethnic and racial diversity, mixed hierarchical economic policies, and the aforementioned post-colonial contextualization (Jackson and Warren, 2005; Schneider, 2013; Howard, De Pedro Rico and Andrade Ciudad, 2018). Based on a 2010 census, approximately 42 million indigenous peoples live in Latin America, accounting for around 8% of the region's total population (The World Bank Group, 2015).¹⁹ In Latin America, the communal fight for political, economic, and social representation and equality has hinged, in large part, around indigenous populations' conceptualization and uniqueness of their own indigenous identities (Jackson and Warren, 2005; McCarty, 2003). Although with varying degrees of success, indigenous movements have lobbied their local and national governments on the preservation and usage of indigenous languages as a comparatively easy way to ensure that the next generation of indigenous peoples remain connected to their culture (Jackson and Warren, 2005; McCarty, 2003; Gal, 1989). However, more than just national governments challenge the legitimacy

¹⁹ Obviously, there is wide discrepancy in the density of indigenous populations – 8% is merely an average. Mexico, Peru, Brazil, and Ecuador have some of the largest indigenous populations where Uruguay and Argentina have some of the smallest (Jackson and Warren, 2005).

of indigenous languages in Latin America. So too do foreign entities: in particular, multinational corporations (MNCs) and foreign direct investment (FDI).

3.3.2. FDI in Latin America

To develop a theory for the potential effects of FDI inflows upon the indigenous language processes referenced above, I leverage Schneider's hierarchical market economy (HME) typology for Latin America²⁰, and Mosely and Uno's definition of FDI (2013; 2007, p. 925). The latter define FDI as 'longer term cross-border investment, which provides the investor (a multinational firm) with a management interest in an enterprise (an affiliate) and direct control over its production activities' (Mosely and Uno, 2007, p. 925). In using the HME model, FDI inflows can accordingly be seen as following one of three main 'logics:' market seeking, resource seeking, or efficiency seeking (Schneider, 2013, p. 62). FDI in Latin America is primarily market seeking, indicating that MNCs simply attempt to buy their competitors and equivalents in Latin America only to

²⁰ Although the HME typology is a state-centric approach, there is merit as well to an individual-centric approach. One might argue that individuals choose their language in order to better than chances as jobs by foreign investors permeate the market. I do not discount that some individuals are indeed making this decision. However, I would argue that the state is first and foremost directing these macro-level language changes. The state is working with the MNCs, funding or defunding the indigenous language education, and directing far-reaching macro linguistic policy. Therefore, I argue in favor of a state-centric approach.

sure up their portion of the market share (Schneider, 2013)^{21,22}. This is consistent with Latin America's abundance of natural resources, large informal sector, family-oriented labor markets, and reliance on private institutions for major capital movement (Gordon and Weber, 2007; Schneider, 2013; Biglaiser and DeRoun, 2006).

Conceptualizing FDI inflows in Latin America as market seeking allows me to isolate a number of similar negative externalities to those posited for indigenous languages above and below: MNCs that seek to buy up local and other transnational businesses in Latin America oftentimes care little for anything but securing their own monopoly over the market. In turn, creates a rigid path dependence (Schneider, 2013). Thus, FDI controls how, when, and in which sectors the market develops. Other causal drivers, such as trade or other forms of investment²³, have been explored in other studies of the relationships between language usage and transnational economic flows (Liu and Pizzi, 2016; Pinto and Zhu, 2016; Kim et al, 2015; Konara and Wei, 2014; Selmier and Oh, 2013). However, FDI inflows offer an understanding of market relationships that trade, investment, and GDP cannot. Indeed, given that FDI inflows are dependent upon at least some degree of a host country's workforce being compatible with the needs of foreign MNCs, these FDI inflows

²¹ The MNCs are not always successful in these endeavors. However, under Schneider's modification of the models of varieties of capitalism, hierarchical market economies do consistently *seek* to create a monopoly through these means, and this is one of their primary motivating factors in investment in Latin America (see Schneider, 2013; and, for further information on hierarchy and economy, Back and Zavala, 2018).

²² Note that some FDI is indeed resource seeking. While such FDI may indeed be more focused in rural areas, my theory and mechanisms still hold even in this case. Moreover, even if market seeking FDI tends to locate in cities and touristic areas, its pressures on language policy will often affect all areas of a country since language policy is typically national-level—meaning that any adjustments to language policy via urban/touristic area FDI—pressures will shift language policy nation-wide. However, none of this should discount the nuance of FDI in the region.

²³ Such as foreign portfolio investment.

are likely to exhibit the most observable pressures on host country language policies amongst the various economic factors mentioned above.

3.3.3. The National Politics of Language

There are several inherent ‘political’ features of language, which at the national level often encompass the choices made by governments to protect or prioritize some language over others within both formal and informal policies, as well as in overall levels of political responsiveness²⁴. To this end, the political nature of language has a further two elements: national political institutions and political economics. By national political institutions, I refer to the idea that national governments can choose to actively grant or deny indigenous language recognition (Liu, Gandhi, and Bell, 2018). By political economics, I refer to the idea that language has an effect on a nation state’s economic success, albeit while creating both economic winners and losers.

As the above paragraph alludes to, national governments in Latin America, as is the case for governments across the world, typically maintain a monopoly on power(s) to officially recognize indigenous groups, create and incorporate ministries to protect their lands, identities and culture, and designate money specifically for indigenous education in the primary and secondary school systems, in public and government spaces, in the media, and beyond (Liu, 2017; Liu, Gandhi, and Bell, 2018). Beyond these core roles, national governments also directly influence a wide variety of language policies within any particular country, including, for example, policies pertaining to the languages that

²⁴ For a full explanation of the politics of language, an excellent starting point is Coulmas (2005).

indigenous and non-indigenous populations can use when accessing government information and services, and dealing with their government's criminal justice system (see: Howard, Ricoy, and Andrade Ciudad, 2018). In sum, national governments play a key role in shaping the languages that are prioritized within the public and economic spheres within any particular country. This is most explicit in national governments' choices on which languages to recognize (Liu, 2017), but also implicitly operates through subsequent choices by governments in terms of which languages actively protect (through language revitalization educational programs and the like), and the informal language barriers established by governments in terms of access to education or related governmental resources (see, generally, Safran and Liu, 2012).

3.3.4. FDI and Language: A Direct Link

Extant research suggests that governments will actively manipulate the language policy tools outlined above to maximize their receipt of FDI inflows. The rationale for this rests on a government's recognition that, by encouraging a domestic workforce that is more fluent in official languages such as Spanish, Portuguese, and English a country can become more attractive to international investors and MNCs. To this end, Liu and Pizzi argue that for workers in a particular country, 'knowing the official language (even as a second language) can reduce transactions costs, we should observe a growing presence among the non-L1 (i.e., non-native language) speakers in the economy over time' (2016 p. 973). That is, a set of workers that already speak international languages shared by MNCs and other international investors will reduce the need to invest additional resources (in

terms of time, money, or human capital) in identifying and establishing alternative routes of communication absent a common language.

The streamlining of communication into a common language is accordingly seen not only as the most economically efficient option, but also one that minimizes any economic risk of miscommunication or misinterpretation (Easterly and Levine, 1997; Konara and Wei, 2014). It is also likely that MNCs will lobby potential FDI host governments to this effect, given that the former have a widely established record of lobby host governments over financial and education policies, over taxes and environmental laws, and related assistance for streamlining their investments as much as possible (Schneider, 2013; Cárdenas Neira, Cabalin, and Montero, 2017; Mosely and Uno, 2007; Anon, 2012). To this end, literature has consistently found that national language policies have played a key deciding role in attracting FDI, trade, and other economic inflows (Levinsohn, 2007, Kim et al., 2015; Konara and Wei, 2014, Selmier and Oh, 2013). It thus follows that prioritizing non-indigenous language (i.e., majority language) education and related resources would be an obvious lobbying target, and in turn, policy solution for reducing anticipated transaction costs and financial risks for MNCs, and thus for attracting higher rates of FDI inflows.

Importantly, while such policies could in theory produce a degree of bilingualism or multilingualism that would ensure increased FDI inflows alongside a maintenance of indigenous language usage, there are several reasons to believe that prioritizing international languages in education and policy, and FDI inflows in a country's economy and workforce, will more directly follow the logic of a zero-sum game. In such instances,

evidence suggests that indigenous peoples will often begin to prioritize their children's learning Spanish, Portuguese or English over their indigenous languages (even if they are still bilingual) in order to get ahead economically (Garcia, 2003)²⁵. Furthermore, the campaign to streamline language among indigenous populations in Latin America 'may not facilitate more fluent communication with Spanish speaking officialdom, but rather have the opposite effect' (Howard, Ricoy, and Andrade Ciudad, 2018, p. 25). There is indeed potentially a difference between Spanish/Portuguese education and learning the English language through means such as soft power (movies, social media, etc.) outside of the state promotion of a particular language. In this sense, English can be seen as a skill²⁶ and a language, complicating its relationship with state languages. However, I argue that no matter how the language is learned, there still 86earns deeper problems with a prioritization of non-indigenous languages. That is, no matter the non-indigenous language, the problems remain the same. Instead, bilingual, streamlined language usage often masks a deeper-rooted issue with linguistics learning comprehension (Howard, Ricoy, and Andrade Ciudad, 2018).

Mannheim (2011) discusses the politicization of language, – specifically Southern Peruvian Quechua – arguing that even naming the language 'Quechua' began an almost domino-effect of intertwining politics and language. A prime example of the difficulties and nuance of bilingual and/or multilingualism is seen in the recent push by the Peruvian government for indigenous youths to prioritize learning both English and Spanish over

²⁵ By adopting the MNCs' preferred language, indigenous peoples can be considered more qualified for promotion or more efficient for employment since the company does not need to invest in language training (Fredriksson, Barner-Rasmussen, and Piekkari, 2006).

²⁶ Think of computer literacy or proficiency in a vocational skill

their indigenous languages, since both (although especially the former) are the ‘ticket to academic and financial success’ (Sumida Humana, 2014, p. 71). Sumida Humana highlights how, in Peru, some school systems actually come to discriminate against both indigenous Peruvian students and their language, highlighting that ‘school administrators in Hatun Shunqo, including the director (principal) and his staff, largely viewed Wanka cultural history as being forgotten and the Quechua Wanka language as dying and/or irrelevant to academic achievement’ (2014, p. 77). In Peru, ‘Administrators and teachers tended to focus on academic achievement aligned with parental desires for their children to become “professionals,” reflecting a movement away from the subsistence farming lifestyle’ (Sumida Humana, 2014, p. 81).

Anecdotal evidence from throughout Latin America suggests that such processes do in turn lead to an erosion of indigenous language usage. A member of the Mapudungun-speaking Lof community in Chile, for instance, describes how her people’s historical encounters with MNCs impact her understanding of FDI now. She says that, in the past: ‘In the land of the new *latifundistas*, they [the Mapuches] were prohibited from speaking their language. The white men cut the tongues and ears of the Mapuches if they heard someone speaking Mapudungun’²⁷ (José Quirog, 2017, p. 2). Another Lof activist describes their fight against the MNCs: ‘We are the mosquito who bothers the arm of [The United Colours of] Benetton. Indeed, this goes much further. An occupation such as ours puts other companies in check – in the region, nationally, and internationally. This type of

²⁷ See Appendix B, Part B.1 for original text.

occupation generates imitation from other communities. We are slowly planting the idea of recuperating territorial control'²⁸ (José Quirog, 2017, p. 4).

The case of Peru demonstrates how this cycle works. Peruvian school-aged children learn English as a compulsory part of their education (Cronquist and Fiszbein, 2017). As Cronquist and Fiszbein demonstrate in their report on the status of English language education in Latin America: 'Peru's plan to implement a national English program considers English proficiency as a way to attract foreign investment, which would then help to increase productivity and competitiveness. Integration into and success in the global economy appears to be a clear strategic motivation behind governments' efforts to increase English proficiency.' (2017, p. 11). Peru has accordingly moved to make English language education policies that specifically benefit MNC investors. Indeed, evidence suggests that these changes became necessary after decades of high un- and under-employment (ICEF Monitor, 2016).

Furthermore, the case of Colombia likewise demonstrates this cycle and its impacts in real time. In Colombia, English language training became compulsory for all school-aged children after the 1991 Constitutional reforms (Cronquist and Fiszbein, 2017). Colombia is now considered to be one of the leaders of bilingual education in Latin America and has had relatively great success in introducing English as a second language (Cronquist and Fiszbein, 2017; Mora, Chiquito, and Zapata, 2019; Usma Wilches, 2009). However, as Usma Wilches argues, Colombia has adopted a very narrow and specific understanding of bilingualism ('elite bilingualism') because of the economic situation in

²⁸ See Appendix B, Part B.1 for original text.

the country: ‘Thus, by imposing a particular notion of bilingualism, the National Bilingual Program does not seem to provide a favorable context for these cultural and language minorities; instead, it seems to continue to stratify and under appreciate them...In the current wave of globalization, members of these elites, even in nations like Colombia, conform to socially and economically privileged groups that attend bilingual schools, work in multinational corporations, travel around the world, and, as French analyst Bourdieu clearly explained, attempt to retain and transform economic, social and cultural capital in order to maintain their position in society’ (2009).

Hence, and although Colombia values the concept of bilingual education, indigenous languages are distinctly left out of Colombia’s policies, which have been supported by decades of Colombian governments in favor of attracting MNCs. Recently, Cronquist and Fiszbein’s observations reinforce this contention, especially in their noting that Colombia has experienced ‘market growth and new policies [that] have attracted many investors, which has resulted in an increase of foreign companies established in the country’ which led to ‘the national strategy *Colombia Bilingüe* seeks[ing] to improve students’ English abilities to permit them to have greater mobility and access to better job opportunities’ (2017, pp. 10-11)

In sum, MNCs value markets that provide not only resources and labor, but languages that minimize transaction costs—namely those used in international and regional commerce such as Spanish, Portuguese, or English. All else equal, MNCs will accordingly deprioritize, and underinvest in, less flexible markets that are unwilling and/or unable to align their education and language-related resources to this need. Governments will

recognize this, and the promise and investment of FDI will accordingly compel national governments to prioritize resources and policies for these international languages, often to the detriment of indigenous language speakers and indigenous language policies. Likewise, FDI inflows will then further undermine indigenous language usage by (i) disrupting communities and (ii) encouraging the population to seek out jobs (and language education in anticipation of said jobs) that are not as conducive to the continuous practice of indigenous languages. Through these channels, FDI inflows will exert a negative effect on the maintenance and usage of indigenous minority languages.

3.3.5. FDI Inflows and Indigenous Minority Languages: Hypothesis

I return here to the question that this investigation seeks to answer: what is the relationship between FDI inflows and indigenous languages in Latin America? Given the theoretical framework above, I hypothesize that a negative relationship exists between FDI inflows and the protection and usage of indigenous minority languages in Latin America:

H1: There exists a negative relationship between FDI inflows and the prevalence of usage of indigenous minority languages in Latin America.

3.4. Empirical Context: Language Usage in Latin America

For the empirical analysis to follow, Latin America provides extensive variation in country-level economic factors, bilateral economic flows (e.g., FDI), political institutions, and levels of democracy while also allowing this analysis to hold a variety of ‘primary language’ (i.e., Spanish or Portuguese), geography, societal, and historical factors

relatively constant. At the same time, Latin America also provides a rich historical and contemporary background—and literature—on indigenous language usage and indigenous language politics for me to leverage in my assessment of FDI inflows. This ensures both that (1) Latin America is a ‘ideal case’ for any assessment of the adverse effects of international economic factors on indigenous welfare, and (2) any academic findings thereof stand to directly speak to ongoing real-world politics and policies.

Indeed, after centuries of colonization, the indigenous peoples of Latin America and their activist leaders have increasingly pushed for indigenous language education in their primary and secondary schools as a way to reclaim their culture, particularly in the 1990s²⁹ (Vigouroux, 2011; Hornberger and King, 1996; Stroud, 2011; Garcia, 2003). Many activists have argued that a focus on protecting language rights is inherently tied to the protection of rights in other areas of daily life (Diaz Fouces, 2005). Education is the primary route through which minority language speakers worldwide have attempted to protect and grow their languages (Hornberger and King, 1996; Liu, 2011).³⁰ However, there still exists disagreement over the cost-benefit analysis of using primary and secondary education as the primary mechanism for language revitalization (Garcia, 2003; Liu, Gandhi, and Bell, 2018; Liu and Pizzi, 2016). The

²⁹ The 1990s were crucial for indigenous populations in Latin America and elsewhere: After the UN began pushing for the protection of indigenous cultures worldwide, indigenous activists began petitioning their governments for recognition and protection (Jackson and Warren, 2005; McCarty, 2003).

³⁰ The past literature that addresses routes through which minority language speakers have attempted to protect and use their indigenous languages outside of education is relatively new. It primarily focuses on the regime types (i.e., democracies’ treatments of minority languages versus authoritarians’ treatments of minority languages) (Safran and Liu, 2012; Liu, 2011; Liu, Gandhi and Bell, 2018) and/or indigenous language use in government settings.

analysis below will offer insights into these latter tensions, in particular by evaluating a new potential set of adverse effects of primary language policies on indigenous language usage levels in Latin America.

To this end, there is no perfect measure of language usage – in Latin America or globally. Existing measures come from datasets that are often outdated or do not fully capture the nuance of indigenous language usage, especially over time. The most advanced, and only time varying measure of spoken languages by country to date³¹ is that of Liu and Pizzi (2016). In brief, Liu and Pizzi (2016) sought to re-conceptualize and re-code our understanding of language as a cultural marker. They moved away from the other three common language databases: the 1964 Soviet Atlas Narodov Mira dataset (Anon, 1964; see: Easterly and Levine, 1997), the Ethnic Power Relations dataset (Wimmer, Cederman, and Min, 2009; see: Liu and Pizzi, 2016) and the La Porta dataset (La Porta et al., 1999; see: Alesina et al., 2003; Pinto and Zhu, 2016). These databases are static (i.e., time invariant). Liu and Pizzi instead use the time-varying language data collected from the *Ethnologue* project– the dataset that I also draw from for my analysis.

Liu and Pizzi’s primary argument for using *Ethnologue* rather than the other datasets is that language is a *practical* means of communication, and that tying our conceptualization of language to that of ethnicity³² severely limits our understandings of both language and ethnicity (2016). They correctly state that language is often the definitive, salient ethnic marker; however, the reality remains that many people are

³¹ That this author can find as of 2019.

³² As the other databases do. The Soviet dataset is particularly guilty of this (Anon, 1964). Of course, these datasets all serve purposes in their own right, and are not to be generally disparaged.

bilingual, and that ‘individuals – regardless of their ethnic identities – interact in the official state language, economic exchanges’ (2016, p. 955). The current measures of language usage – and, in particular, ethnolinguistic fractionalization – do not fully take these people into account because they categorize them in constrictive, binary categories of speaking the state language (rarely indigenous languages) or not speaking it at all. Liu and Pizzi also argue that too much weight is given to language as a cultural marker (2016, p. 957). This concept is closely related to Liu and Pizzi’s coding criticism as well. They argue that: ‘Because the extant literature conceptualizes language as an identity marker, the boundaries of the language must match those of the ethnic group (that is, those whose mother tongue is strictly that language)’ (2016, p. 957). Their inclusion of non-native speakers is an important step in creating a more accurate measure of ethnolinguistic heterogeneity (Liu and Pizzi, 2016).

Like Liu and Pizzi, I draw my linguistic proficiency standards from the *Ethnologue* database. *Ethnologue* is a dataset that tracks all seven thousand living languages (Anon, *Ethnologue: Languages of the World*). It has over eighty years in time series data, although it does not collect data annually, nor has it always released new data annually (Anon, *Ethnologue: Languages of the World*). As of 2019, *Ethnologue* is in its twenty-first edition (Anon, *Ethnologue: Languages of the World*). This implies 21 unique time points over the 1953-2019 period of coding, with the data being coded at roughly five-year intervals until 2014 and annually thereafter.

There are costs and benefits to using *Ethnologue*. The benefits are extensive: the data stretches back into the 1950s, giving access to an expansive amount of temporal

variation in indigenous language usage for my dependent variable. *Ethnologue* tracks all known languages, including ones that are extinct or dormant (Anon, *Ethnologue: Languages of the World*). This is particularly important when studying Latin America, as the primary dependent variable for this Chapter is variation in indigenous languages; *Ethnologue* collates data on more than just the national and/or official languages. *Ethnologue*'s collection of data on minority languages is more extensive and specific than many other datasets. By contrast, the aforementioned 'big three' databases focus more on ethnic identities and ethnolinguistic fractionalization measures rather than the languages themselves. In sum, then, *Ethnologue* can be argued to most effectively capture my languages of interest while concurrently providing extensive temporal coverage.

Nevertheless, problematic elements exist within the *Ethnologue* data. Even when *Ethnologue* began releasing data annually, the compilers often pulled from the same sources each year. That is, the languages are not always re-measured every year, even if a new edition of *Ethnologue* is available. The compilers are reliant on other people to conduct the quantification, and therefore, if no one submits a new statistic, the data remains the same. Consequently, there is less temporal variation than there would be in an ideal dataset. *Ethnologue* is also run by SIL international, which is a religious (in this case, Christian) organization focused on missionary work (Anon, 2018). This could, in theory, affect the unbiased nature of the data collection, as SIL could have ulterior motivations in developing *Ethnologue* beyond the academic or theoretical measurement of spoken language. However, I argue that these potential effects are mitigated by the third-party data collection mentioned above. *Ethnologue*'s language records are mostly curated and

assembled from academic sources, rather than from missionaries working in the field³³. This helps to offset any concerns of *Ethnologue*'s broader agenda creeping into its measurement of language usage, as in this case it leverages more objective sources for the actual task of measurement. It then simply compiles these records into the most comprehensive aggregate measures of language usage for each country and language over time – so as to provide interested parties with the most accurate records of language usage across the world. Due to these complications, one might argue that my reported results below will actually be biased against my findings, making the significance of any results, if obtained, even more notable.

Overall, *Ethnologue* presents the best available raw data in terms of (indigenous) language disaggregation and temporal aggregation with which to work. Its time-varying country-by-country breakdown and classification system allows me to measure the prevalence and variation of individual languages over time, rather than just any variation in official/national language or in ethnic population/ethnolinguistic fractionalization. As a result, I manually coded every single indigenous language record for every time point of interest across 20 countries in Latin America for the 1988-2018 time period, from *Ethnologue*'s original printed source material; as aforementioned, these coding details appear below and in the supplemental appendix. This coded information is then used to construct my dependent variable, to which I now turn.

³³ Although there are instances where SIL is the only organization to have measured a specific language.

3.5. Research Design

3.5.1. Sample and Dependent Variable

In this Chapter, my dependent variable is ‘indigenous language speakers.’ In order to be counted as indigenous, the languages must *actually* be indigenous to that given country in Latin America; that is, they cannot be transplant languages from other countries in Latin America or elsewhere. This eliminates the Italian-speaking population in Argentina, the Plautdietsch-speaking community in Bolivia, and the like. Keeping the focus on indigenous languages ensures that I am examining changes in the indigenous communities, rather than all minority communities.

For this Chapter, I perform my analysis on a country-year sample that encompasses only the countries in South and Central America³⁴. The 20 countries that I include are: Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Uruguay, and Venezuela. The choice to exclude the Caribbean from this Chapter is not to argue that it is not a critical region to study in the wider political sciences. Instead, I exclude the Caribbean because, due to their unique colonial past and modern political experiences, I do not want to overwrite their distinctive experiences into my work. I should note, I do believe that the analysis I am carrying out here could be done in the Caribbean; however, the historical structural framework would look different.

This dependent variable and all corresponding analyses will span thirty years, from 1988-2018. This covers *Ethnologue* editions eleven through twenty-one. I chose this

³⁴ Also including Mexico and excluding French Guiana.

temporal range because it captures the time period that precedes the rise of strong indigenous activism in Latin America (mid-1990s) through the present day; it also coincides with the end of the ISI (import substitution industrialization) period in Latin America and thus encompasses a wide amount of variation in FDI inflows over time for my countries of interest. Although the *Ethnologue* raw data spans back eighty years, controlling for potential confounding variables for that full 80-year time frame was not feasible, given the levels of missingness on most relevant economic controls as one goes back further in time.

As alluded to above, my dependent variable and overall sample are each measured at the country-year unit of analysis. The time-series cross-sectional nature of this type of data structure allows for the measurement and evaluation of evaluate variation in indigenous language usage (and its determinants) across both time and Latin American countries. The resultant panel dataset has 12,835 total observations from 20 countries across 30 years, before accounting for missingness on several relevant control variables.³⁵

There were several complications with creating this dependent variable and dataset. First, as with most datasets, the original source materials suffered from a missingness problem with the earlier years of some countries. In some instances, *Ethnologue* ceases data collection for some languages because of its erroneous classification of said language as distinct. However, this was not a substantial issue, as it only arose in an extremely small subset of all indigenous languages coded. Additionally, for those languages that faced such

³⁵ For a fuller exploration into my usage of *Ethnologue*, see Appendix B.

missingness issues, they typically corresponded to languages with fewer than 50 living speakers. Additionally, the vast majority of cases are not missing, and those cases that are missing are typically for spoken languages with very few individuals³⁶ and are unlikely to significantly affect my aggregate summed indigenous language measure. Second, some of the original *Ethnologue* measures for the older years in the time series data are string variables. Their labels are those such as ‘few speakers’ or ‘individuals in a single family.’³⁷ For these ambiguous entries, I coded them systematically at 10. This value is arbitrary, but it is also unlikely to have any effect on the present analysis. Third, the number of speakers of some languages was likewise (albeit rarely) recorded as ‘10 or 20’ or ‘between 5,000 and 5,500.’ In these instances, I averaged the two values given to create an approximation of the number of speakers. Fourth, sometimes the total number of languages spoken in a given country fluctuated from year to year because certain languages are included/excluded, renamed, or discovered to be the same language. If no data existed for a language in instances such as this, it is assigned a missing value (not ‘0 speakers’).

3.5.2. FDI as the Independent Variable

My independent variable is defined as FDI inflows as a share of GDP. To operationalize this independent variable, I am using the FDI inflows measure from the University of Gothenburg’s *Quality of Government* Dataset (2019). Their data is in turn drawn from the World Bank’s World Development Indicators (2019). This is a standard

³⁶ Many languages with missing data had fewer than fifty speakers.

³⁷ I assumed that a family was made up of four members – this value will not affect my data analysis since I am only looking at languages with more than 50 speakers.

measure of FDI inflows that has been widely used to evaluate FDI flows within the existing literature (see generally: Martín Cervantes, Rueda López and Cruz Rambaud, 2020; Yang and Xian, 2018). An FDI inflow is defined as: ‘Foreign direct investment are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments’ (2019, p. 684). This measure of FDI inflow is divided by GDP to adjust for the different scaling of inflows by country. As discussed in more detail immediately below, lagged five (or three) year moving averages of this measure are then ultimately used as my independent variable in my final model specifications.

More specifically, to fully operationalize this FDI inflows variable for analysis, I transform it to correspond to the lagged five-year moving average of a given country’s FDI inflows. This decision is theoretically necessary given that (annual) FDI inflows are unlikely immediately affecting indigenous language usage. Rather, it will take time for FDI inflows to have the effects on indigenous language usage outlined above. My choice of lagged five-year moving average has precedent for considerations of FDI inflows’ societal and political-economic effects (Kim et al., 2015). In the robustness section further below, I also illustrate that all relevant findings are robust to the usage of lagged three-year moving averages in place of lagged five-year moving averages.

3.5.3. Controls³⁸

Drawing on the extant literature, I include a wide array of control variables. The first is GDP per capita, as measured from the same World Bank's World Development Index (2019) dataset as my independent variable, which is a common control in studies on FDI (Liu, 2017; Liu and Pizzi, 2016; Kim et al., 2015). GDP per capita has the potential to increase FDI inflows: a higher GDP per capita could signal to MNCs that the country is stable and safe – that is, their money will be a lower risk investment (see: Liu, 2017; Kim et al., 2015). Lower GDP per capita can also signal a fluctuation in the amount of FDI received, as countries who are poorer tend to rely more heavily on FDI and foreign aid to keep their economies moving (see Liu, 2017). I also consider a country's level of external debt, as this helps to mitigate the possibility that other structural economic adjustments could be influencing the amount of FDI a country is receiving (see Mosely and Uno, 2007). Indeed, there is a potential that the higher the amount of external debt, the more likely a country is to seek out FDI (Cerny, 2010), no matter how damaging it could be to its internal structures.

I further control for regime type, as measured by the Polity IV Project (2019). This is a common control variable in studies on FDI (see Liu, 2017; Kim et al., 2015; Liu, Gandhi, and Bell, 2018; Safran and Liu, 2012). The Polity2 (hereafter referred to as Polity Score) measure is a 21-point scale where the more negative values correspond to a more authoritarian country, and the more positive values to a more democratic country. Here, I include regime type under the guise that an increase in democratization may lead to an

³⁸ For a full list of control variables, see Appendix B.

increase in FDI (Liu, 2017). Although many governments in Latin America are relatively homogenous when it comes to Polity Scores, I would be remiss not to include this measure of regime type. As was the case for my primary FDI inflow independent variable measure, I then transformed this Polity2 measure—and all economic controls mentioned further above—by taking its lagged five-year moving average prior to including it within my model specifications. All models also include a time trend control.

To further account for historical heterogeneity in my sample, I also add (i) a control for a time varying Herfindahl index (H-index) of each country's indigenous language diversity (via number of speakers), coded from the *Ethnologue* data described above, and (ii) a control for each country's colonial history. The latter control is a dichotomous variable measuring whether (=1) or not (=0) a country in the sample was ever a Spanish colony. Although numerous other countries colonized Latin America, Spain was the most pervasive – and therefore Spanish is the most pervasive of languages. This control variable thus captures each sample-country's colonial legacy. I then further add a measure for the number of total non-indigenous language speakers to some specifications below, to ensure that my results are not dependent on the inclusion or omission of total non-indigenous speakers within any one country. In addition, several larger specifications also include a number of other standard controls from the literature. Stated briefly, these controls are: FDI outflows, trade as a share of GDP, total population, cumulative interest rates, primary schooling, urban population growth, and rural population as a percentage of total population—each obtained from the Quality of Governance database cited above—as well as the aforementioned indigenous-language H-index.

Summary statistics for all variables discussed above appear in Appendix B. The robustness section further below presents several additional extensions.

3.6. Statistical models

The dependent variable in this analysis corresponds to a count of the number of indigenous language speakers in any particular country-year. Accordingly, a series of event count models are utilized in this Chapter's primary analysis. Event count models are appropriate here given the strictly non-negative, discrete nature of the dependent variable considered. In particular, this Chapter uses a series of negative binomial event count models to evaluate the relationship between FDI and indigenous language usage, given the potential for conditional over-dispersion in my dependent count variable. As demonstrated in the appendix, these primary findings are robust to the alternate use of several additional modeling approaches, including linear models and Poisson count models.

My primary set of negative binomial models appear in Table 3.1 below. This table presents a series of models that incrementally add in the aforementioned controls to arrive at a fully specified model (Model 4). Recall that all relevant independent and control variables (aside from the count of non-indigenous speakers and colonialism control) correspond to the lagged five-year moving average value for that particular variable. The rationale for considering a lagged five-year moving average of FDI (and thus all relevant political and economic controls) is that it is unlikely that (annual) FDI inflows will immediately affect indigenous language usage given the potentially causal pathways outlined above. Indeed, it would take time for the MNCs and national governments that are

involved in these FDI activities to influence, setup, and then implement any relevant (formal or informal) language policies. A lagged five-year moving average is relatively standard for considerations of FDI inflows (see Kim et al., 2015), though note that the robustness section (and results reported in the Appendix) also illustrate that all findings are robust to the usage of lagged three-year moving averages in place of lagged five-year moving averages for my measure of FDI and all other relevant controls.

Table 3.1: Negative Binomial Count Regression Models of Number of Indigenous Language Speakers

VARIABLES	Model 1	Model 2	Model 3	Model 4
FDI inflows	-0.023*** (0.006)	-0.041*** (0.006)	-0.025*** (0.005)	-0.027*** (0.008)
FDI outflows		0.051*** (0.019)	-0.015 (0.018)	-0.018 (0.026)
GDP per capita		-3.771*** (0.310)	-2.413*** (0.381)	-3.066*** (0.538)
Population		0.973*** (0.330)	1.764*** (0.344)	3.359*** (0.423)
Non-indigenous speakers	0.138*** (0.042)	0.321*** (0.062)	-0.031 (0.089)	0.056 (0.099)
Colonial history			2.907*** (0.324)	5.271*** (0.654)
Cumulative interest rate			0.006 (0.008)	-0.000 (0.010)
Trade				0.005 (0.005)
Urban population growth				-0.397** (0.179)
Primary school				-0.046*** (0.012)
Rural population				0.021 (0.016)
Polity score				-0.123** (0.054)
Indig. H-index				1.816*** (0.521)
Time trend	0.034*** (0.009)	0.047*** (0.009)	0.071*** (0.011)	0.017 (0.014)
Ln α	1.140*** (0.047)	0.946*** (0.052)	0.868*** (0.061)	0.754*** (0.066)
Constant	11.715*** (0.651)	10.380*** (0.881)	11.392*** (1.167)	11.128*** (2.129)
Observations	609	509	389	345
Log-likelihood	-8872	-7411	-5488	-4902

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1; Note: All independent variables correspond to lagged five-year moving averages aside from non-indigenous speakers, Indig. H-index, and colonialism

Turning to Table 3.1, the first negative binomial model reported is the simplest negative binomial count model considered, with its inclusion of no control variables. That is, Model 1 captures the basic bivariate relationship between FDI inflows and the lagged indigenous language count. The negative and statistically significant ($p < 0.01$) coefficient estimate for the lagged moving average FDI inflows, -0.023, confirms my hypothesis at its most basic level: FDI inflows have a negative effect on the number of indigenous language speakers. Model 1 provides an initial understanding of this relationship, and indicates that, absent any control variables (and the potential adverse effects that such control variables may have on my model specifications due to missing values and listwise deletion) FDI inflows exert a negative and statistically significant effect on the number of indigenous language speakers in any particular country-year within my Latin American country sample.

Model 2 incorporates several of the aforementioned control variables relating to the macroeconomic status of the state in relation to their populations. The control variables included in Model 2 are the five-year lagged moving average measures of FDI net output, GDP per capita, the annual measure for the number of non-indigenous language speakers, and the lagged moving average of a country's population.³⁹ The inclusion of these control variables facilitates a more rigorous understanding of the relationship between FDI and indigenous language speakers. Here, the negative and statistically significant ($p < 0.01$) coefficient for the lagged, cumulative FDI measure of -0.041 further lends support to my

³⁹ In both cases, the averaged values have been rescaled for interpretability by dividing each raw average by 1,000,000.

hypothesis in that it implies that increases in FDI inflows over prior five-year periods lead to decreases total indigenous language speakers for Latin American countries during the 1988-2018 time period. All of the control variables added to this particular model exhibit statistical significance at least at the $p < 0.05$ level in anticipated directions. I briefly interpret these control variable effects towards the end of this section.

Model 3 incorporates an even more extensive set of control variables. In doing so, I am able to conclude that FDI inflows continue to exert a statistically significant ($p < 0.01$) negative effect on indigenous language speakers. Building to my most extensively specified model (Model 4) helps to ensure that my findings are not contingent on any specific subset of control variables included. This is relevant because my control variables each exhibit different levels of missingness, and hence impose different degrees of listwise deletion, on my final estimation model. Model 3 includes all of the control variables from Model 2, as well as those that are related to the historical colonial history and further, more government-level economic measures, which as noted above correspond to lagged, five-year moving averages. Returning to Model 3, my lagged five-year moving average FDI inflows coefficient, -0.025, remains statistically significant at the $p < 0.01$ level. This supports the hypothesis outlined above.

Model 4 is the final model reported in Table 3.1. It includes all of the control variables laid out earlier in this Chapter. This model still yields negative, statistically significant results with a coefficient of -0.027 and p-value of $p < 0.01$ for my lagged moving average FDI inflows measure. This again confirms my hypothesis. In order to better evaluate the substantive magnitude of this relationship, I calculate and plot the out-of-

sample predicted count of indigenous language speakers across the range of lagged FDI inflows using Model 4, in Figure 3 below. These predicted values plotted in this figure were generated while holding all other variables to their sample means, and also include 95% confidence intervals. Interpreting this plot, we find, for example, that moving from the 25th percentile (5.4% of GDP) to the 75th percentile (22.4% of GDP) of my lagged five-year moving average FDI inflows measure implies a decrease in the total count of indigenous language speakers in a particular country of approximately 300,000 total speakers. Given that the average country-year in my sample has 1,796,595 indigenous speakers, this is a fairly sizable decrease. Thus, in line with my hypothesis, FDI inflows exerts a negative and substantively sizable effect on the number of indigenous language speakers within Latin America—even after accounting for a wide range of potential confounds.

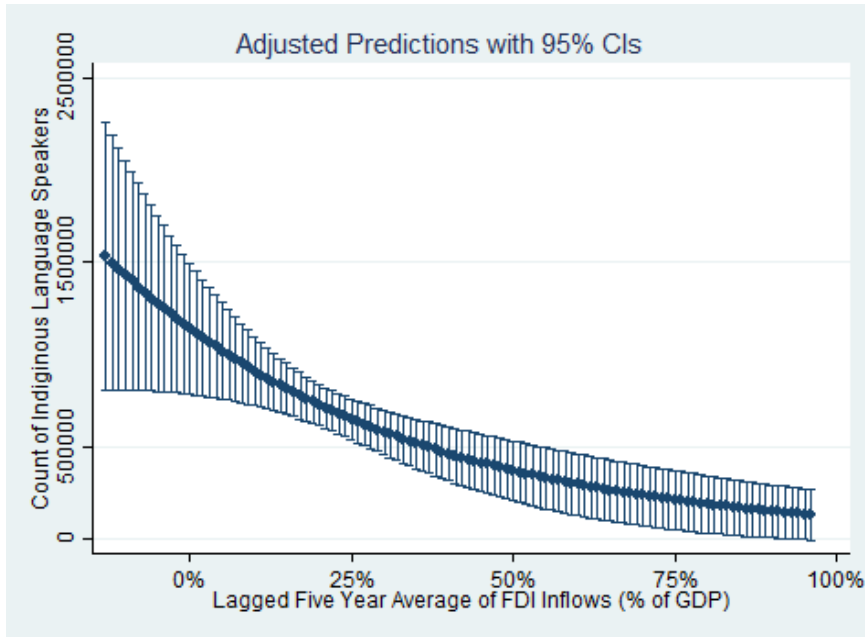


Figure 3.1: Predicted Probabilities of FDI on Indigenous Language Usage

Across the models reported in Table 3.1, it is worth noting that a number of key control variables also consistently exhibit statistical significance in anticipated directions. Namely: lagged average GDP (negative effect), lagged average population (positive effect), the dichotomous colonial history variable (positive effect), urban population growth (negative effect), lagged average primary school levels (negative effect), urban population growth (negative effect), indigenous H-index (positive effect), and the lagged average Polity scores (negative effect). The statistical significance of these control

variables is intriguing, mainly because those with significance have prominent places in much of the existing literature, and generally point in intuitive and anticipated directions.

3.6.1. Sensitivity tests

In order to verify the robustness of these results, I estimate a series of additional model specifications⁴⁰ in order to evaluate the consistency of my negative and statistically significant estimates for FDI inflows. All corresponding tables are reported in Appendix B, and the key results from each test are briefly summarized here. The first set of robustness tests is a series of standard, ordinary least squares (OLS) regressions that follow the same sequential order of control variables included above, but that use the logged total number of indigenous language speakers as the dependent variable, as opposed to the unlogged count of indigenous language speakers. The results of these OLS regressions confirm the results found in the negative binomial regression models. FDI inflows is always negative and statistically significant under this alternative modelling setup. The second set of robustness tests provide a series of alternate negative binomial count regression models that use a non-logged non-indigenous speaker count as a control. The rationale behind using a non-logged, non-indigenous speaker count as a control is to ensure that the inclusion of the logged control was not diminishing the power of this variable as a control, given that my dependent count variable was itself not logged in the main negative binomial models. This second set of robustness tests also confirm the results for FDI inflows found in the original four models, with negative and statistically significant results.

⁴⁰ For the full tables of coefficient estimates and standard errors, see Appendix B.

The third set of robustness tests presents a series of negative binomial count regressions with a lagged dependent variable. Given the panel structure of my data, including this lagged dependent variable helps to address concerns that temporal dependence in indigenous language speakers within countries over time may be influencing my findings. That being said, I do not include this lagged dependent variable in my main models given concerns that such a control may contribute to model misspecification (Bellemare, Masaki, and Pepinsky, 2017). As with the others, these robustness tests confirm the results of the original four models, with my negative and statistically significant coefficient estimate on my primary FDI measure. The next robustness test is a series Poisson regression models, which are an alternate type of event count model. As above, my primary findings remain unchanged under this alternate modelling framework. Following this, I present models that additionally control for the (logged) number of English-language speakers in each country. This control, back and forward coded from *Ethnologue* where available, exhibits substantially more missingness, and less time variation, relative to the *Ethnologue* measures presented above. The results of these tests are generally consistent with those presented above, although my core coefficient estimate only achieves statistical significance in two of four models considered.

Following this, I present a set of results that employ period fixed effects in place of the simple time trend considered in Table 3.1. My results are robust to this alternate means of accounting for temporal dependence in my data. The next set of robustness models in Appendix B then illustrate that my findings for FDI inflows hold across a set of comparable

specifications (to Table 3.1) that instead consider lagged three-year moving averages for my independent variable and controls, as opposed to lagged five-year moving averages.

Finally, I present two sets of model specifications in Appendix B that together re-evaluate my main independent and dependent variable-relationships when using bilateral FDI flow data, separated by Spanish/Portuguese-speaking FDI source countries and by other FDI source countries. These data, taken from UNCTAD and Donaubauer, Neumayer, and Nunnenkamp (2020), exhibit a shorter time window than that which was considered above *and* higher rates of country-specific missingness. To create appropriate lagged five-year moving averages from these bilateral FDI flows data, missing FDI data for some country-years were accordingly interpolated. As the final two Appendix B tables illustrate, these dyadic models support the conclusions discussed above, with the coefficient estimate for this alternative bilateral FDI measure exhibiting a negative sign across all eight models considered and achieving statistical significance in seven of the eight models considered.

3.7. Conclusion and Discussion

Political decisions cannot be made without language as a centerpiece. This Chapter seeks to understand the relationship between foreign direct investment (FDI) and indigenous language usage in Latin America through the use of a political-economic framework, a new dataset, and a series of negative binomial regression models. Through engagement with existing literatures on language and international political economy, as well as several broader literatures on indigenous groups in Latin America, this Chapter

develops and confirms the hypothesis that FDI has had a significant and negative effect on indigenous language usage in Latin America since the early 1980s.

Accordingly, this Chapter advances existing perceptions and conceptualizations of FDI usage in the Global South, particularly highlighting the potentially negative effects of an otherwise positively connotated international economic flows and investments. FDI is sought after by national governments in order to improve the lives of their citizens through the accumulation of wealth and reinvestment in activities encompassing domestic education, industry, and research—among others. However, its darker underbelly reveals the destruction of culture via language erosion. FDI has without question had some positive effects in Latin America. Yet, as my findings suggest, indigenous and other marginalized peoples may find it difficult to overcome the barriers that FDI also adds. An increase in FDI inflows can lead to the creation of new government policy that deprioritizes indigenous language and can therefore have substantial effects on the daily lives of indigenous populations. Although MNCs rarely overtly target minority and/or indigenous populations, these groups are often disproportionately affected by MNC policies.

This Chapter's insights underscore the notion that national governments seeking FDI implicitly engage with the politics of language. Given the broader systemic effects of FDI and MNCs on indigenous rights in Latin America, the findings of this Chapter suggest an especially pernicious effect on the usage and support for indigenous language usage within these countries in particular. This Chapter's contribution to understanding the relationship between FDI and indigenous language usage in Latin America speaks to political science literature on comparative political economy, anthropological literature on

indigenous cultures in post-colonial states, linguistics literature on translation and interpretation, and sociological literature on education. The puzzle presented in this Chapter, the relationship between FDI and indigenous language usage that it uncovers, accordingly intersects disciplines that work to understand the core question of how humans interact with their environment and vice versa.

This Chapter also serves as a springboard to further research – not just on the relationship between Latin America, FDI, and indigenous language usage, but on the greater problems of asymmetry that persist between indigenous peoples and their governments in Latin America and around the world. The theoretical framework of this Chapter demonstrates the potential for future applications in other regions, at least in part. Future research should evaluate these aforementioned findings for FDI inflows not only for the Latin American region, but also globally, and potentially over even longer timescales. Likewise, subsequent research could also extend this Chapter’s current insights to evaluate how other transnational economic and/or political flows may similarly undermine the maintenance of indigenous language usage throughout Latin America and elsewhere. The time varying data on indigenous language usage collected here can serve as a foundation for such analyses. Last but not least, this research could also benefit from other methodological approaches to the study of the above phenomena, including survey-based research into indigenous speakers in Latin America, such as that provided by the AmericasBarometer Project (LAPOP).

Chapter 4

THE PUEBLO ORGANIZES ALONE AND WITHOUT PARTIES⁴¹: INDIGENOUS LANGUAGE AND SYMBOLIC RESOURCE SOCIAL MOVEMENTS IN LATIN AMERICA

4.1. Abstract

The staggering diversity of indigenous languages in Latin America may imply to some that indigenous language diversity serves as a barrier to effective indigenous protest. Indeed, extant political protest literature suggests that cooperation, mobilization, coordination at the group (Vogt, 2016; Kingstone, Young, and Aubrey, 2013), interpersonal (Fisher, 1994), and societal (Yashar, 2005; Sieder, 2002) levels can be impeded by primary language differences among relevant groups and individuals. Yet, when looking across past indigenous language protests and social movements in Latin America, the most successful by far have been transnational and multi-language movements such as the indigenous fight for cultural autonomy in Chile. What explains this contradiction between expectations and outcomes in cross-language indigenous protest and mobilization in Latin America? This Chapter situates this problem within a symbolic resource framework to develop a theory and empirical test that explain this divergent pattern. Through an evaluation of case-based evidence and quantitative tests, this Chapter evaluates the hypothesis that indigenous protestors that exhibit a diversity in indigenous languages and cultures will improve the effectiveness and success rates of their protests.

⁴¹ The title from this Chapter comes from an interview by Simmons (2016).

The results of both the qualitative and quantitative analyses in this Chapter yield new insights into the relationship between indigenous language users in Latin America and the effectiveness of symbolic resource protests in the region.

4.2. Introduction

The staggering diversity of indigenous languages in Latin America may imply to some that indigenous language diversity serves as a barrier to effective indigenous protest. Indeed, extant political protest literature suggests that cooperation, mobilization, coordination at the group (Vogt, 2016; Kingstone, Young, and Aubrey, 2013), interpersonal (Fisher, 1994), and societal (Yashar, 2005; Sieder, 2002) levels can be impeded by primary language differences among relevant groups and individuals. Yet, when looking across past indigenous language protests and social movements in Latin America, the most successful by far have been transnational and multi-language movements such as the indigenous fight for cultural autonomy in Chile. What explains this contradiction between expectations and outcomes in cross-language indigenous protest and mobilization in Latin America?

This Chapter situates this problem within a symbolic resource framework to develop a theory and empirical test that together explain this divergent pattern. Through a series of illustrative cases and quantitative tests, this Chapter evaluates the hypothesis that indigenous protestors that exhibit more diversity in indigenous languages and cultures involved in said protests will improve the effectiveness and success rates of their protests. The results of both the qualitative and quantitative analyses in this Chapter yield new

insights into the relationship between indigenous language users in Latin America and the effectiveness of protests involving diverse indigenous participation in the region.

More specifically, this Chapter investigates the effects of language heterogeneity in indigenous political protests on government response through the lens of symbolic resources. I define symbolic resources as any resource that has a deeper, unifying meaning for a culture or a group of cultures (see generally: Zittoun et al, 2003). This definition of symbolic resource is intentionally broad: limiting its nature would be counterproductive to understanding the deeply embedded cultural significance that any given resource has to any particular culture. Instead, I put forward a definition that is as encompassing as possible in order to recognize how much variation there is in symbolic resources. Examples of symbolic resources could include anything from food to fabric, land to production methods, music to water. In this case, the symbolic resource that I analyse is language.

It is well established, both by my definition and extant ones, that language is a symbolic resource. Indeed, Breton (1984) argues that language is critical to understanding symbolic resources on the whole: “I wish to isolate language as a component of the symbolic order, because of its particular significance in multilingual societies. Language, of course, is a means of communication and as such is part of the instrumental culture. But it is also a critical component of the symbolic culture since it constitutes a basis for defining collective identities and lifestyles” (p. 126). Language is a central part of identity and is a resource for forming and protecting culture. Existing literature also extensively demonstrates that symbolic resources serve as a facilitator for protests, both in Latin America and elsewhere (Davis, 1999; Bomberg and McEwen, 2012; Pfaff and Yang,

2001). Symbolic resources, including environmental and immaterial resources (such as language) inspire protests, especially when threatened (Simmons 2016a; Simmons 2016b, Mische, 2008).

This Chapter serves as a contribution to several facets of political science, including identity politics, linguistic anthropology, and the wide-reaching literature about what makes political protests effective and successful. My argument introduces a novel lens through which to view protest, by centering language as a deciding factor in the success and effectiveness of protests in Latin America, while also expanding and critiquing existing theories of protest success and effectiveness. In testing this argument, I identify tentative qualitative and quantitative evidence to suggest that indigenous language heterogeneity⁴² enhances protest effectiveness in Latin America. As I further elaborate upon in the conclusion to this Chapter, this finding has implications for our understandings of patterns of indigenous representation across Latin America, as well as for future research into the role of linguistic heterogeneity in politics.

The remainder of this Chapter is organized as follows. First, I explore existing explanations and theories concerning protest success and effectiveness, both in Latin America specifically and in a broader sense. Next, I introduce my own theoretical framework which centers on the idea that indigenous protestors that use their shared indigenous language experiences as non-national language users as a unifying factor will improve the effectiveness and success rates of their protests. This section is immediately

⁴² I define linguistic heterogeneity as the diversity of spoken language, specifically in reference to the presence of languages besides the national language.

followed by my illustrative case of the Mapuche peoples in Chile, post-Pinochet. Then, I explain my quantitative research design, including my modeling approach and variables. Next, I discuss my models and results. Finally, I include a brief conclusion and discussion for further research.

4.3. Protests in Latin America: An Overview

This section synthesizes several existing bodies of literature to provide a comprehensive understanding of how Latin American indigenous actors utilize language as a symbolic resource in their protests. The first body of literature with which I engage is that which centers on the determinants of (im)mobilization/participation in indigenous protest across Latin America. This literature, which is vast and well-documented (Yashar, 2007; Teo and Loosemore, 2010; Shekha, 2011; Sieder, 2002; Kingstone, Young, and Aubrey, 2013), contributes a strong foundational understanding of how and why indigenous protests have historically arisen. Here, I emphasize that the purpose of this engagement with the literature is not to overtly critique its sometimes-divergent-sometimes-symbiotic understanding of indigenous mobilization. Instead, I build upon the rifts and junctions of this literature for a richer understanding of the political realities that indigenous communities in Latin America frequently face.

In recent years it has become increasingly relevant amongst political scientists to recognize how indigenous peoples in Latin America act as environmental protectors of their *physical* homelands (see: Raftopoulos and Morley, 2020; Graziano Ceddia, Gunter, and Corriveau-Bourque, 2015; Graziano Ceddia, Gunter, and Paziienza, 2019; Kronik and

Verner, 2010). However, there is much less literature demonstrating the importance of indigenous protection of symbolic resources *because* they are symbolic resources, including that of indigenous language (Graham in Warren and Jackson, 2004). Addressing this deficiency is critical. It is one thing to frame the discussion of indigenous social movements around the tangible protection of their territory; it is another to explore the intersection of indigenous social movements and the protection of less tangible symbolic resources that make up a key part of indigenous identity. Indeed, a small number of recent projects have identified several different symbolic resources as a central factor in indigenous mobilization and protest (Simmons, 2016a; Simmons, 2016b). However, this movement towards unpacking the role of symbolic resources has continuously overlooked the role of identity and language as a symbolic resource in these protest contexts. To address this gap, this Chapter will focus on indigenous languages *as* a protest effectiveness multiplier.⁴³

4.3.1. Sources of Indigenous Mobilization

To understand how indigenous language functions in this manner, it is important to understand the broader context of indigenous protest movements in Latin America. The determinants and achievements of indigenous protest movements have been widely studied (Yashar, 2005; Brockett, 1991; Shekha, 2011; Teo and Loosemore, 2010). In a general sense, the literature in this area explores how indigenous protests have indeed arisen out of

⁴³ This puzzle might present somewhat of a methodological challenge, as some may conceptualize language as a constant instead of a variable. However, the presence versus absence of indigenous language groups – and their rise and decline over time – indeed demonstrates variation.

a broader effort to gain political, social, and economic rights (Sieder, 2002). After the push for indigenous rights in the 1990s,⁴⁴ indigenous activists began petitioning their governments for recognition and protection, often through protest (Sieder, 2002; Jackson and Warren, 2005; McCarty, 2003). In the last three decades, scholars have worked meticulously on understanding how protests in Latin America have shaped modern politics in the region (Moseley, 2018; Rousseau and Morales Hudon, 2017).

The contemporary literature concerning what determines both the precipitation of and motivation for indigenous protest in Latin America is split broadly into two primary areas of inquiry. The first identifies social protest as a means of critiquing or even dismantling neoliberal ideologies in Latin America (Yashar, 2005; Grugel and Riggirozzi, 2012; Rice, 2012; Postero, 2005). The second strand of literature examines indigenous protest in the context of political participation, interrogating with which political parties, behaviors, and/or organizations political protestors engage (Cleary, 2000; Van Cott, 2010; Langer and Muñoz, 2003).

In the former literature, which interrogates social protest movements to understand the changing trajectories and influences of neoliberal policies in the region, a multitude of protest determinants and outcomes are outlined. For example, Yashar (2005) identifies a critical intersection between institutions and identity politics in the region that pushed against the “uneven” reach of the neoliberal state in shaping indigenous identities and often spurring protest (p. 7). She argues that “the politicization of ethnic cleavages and the

⁴⁴ In part due to external pressure from the UN for the protection of indigenous cultures, and in part due to a variety of domestic factors (mostly surrounding debates on the merits of neoliberalism).

motive for organizing resulted from the shift in citizenship regimes and the challenge to local autonomy that ensued” (Yashar, 2005, p. 55). Here, Yashar draws attention to the idea that indigenous protestors are partially motivated to critique the neoliberal state because of a contested relationship between the two actors in the time period immediately following the Second World War.

Yashar’s (2005) conceptualization of changing citizenship differs slightly from Sieder’s (2002) in that the former delineates a variety of citizenship *regimes*, and the latter characterizes citizenship in Latin America – with an emphasis on indigenous citizenship – more along the lines of simple access to democracy and protection of basic rights. Sieder is interested more directly in how the state works to safeguard its citizens direct political rights in a legal and political sense, and how protest plays a role in this process (2002). Notably, though, both agree that the relationship between citizenship, protest, and the state are inextricably linked to one another. This citizenship literature, linking the mobilization of indigenous peoples of Latin America with their relationship to the state, is abundant with critiques of the neoliberal state. Indeed, much of this literature argues that indigenous movements begin with the purpose of altering or erasing part of the neoliberal state. This literature remains distinct from the aforementioned political participation literature in that it engages with broader themes of participation, including how the state interacts with its citizens (rather than only how the citizens interact with the state) (Yashar, 2005; Sieder, 2002).

Here, the peasant mobilization⁴⁵ literature of Latin America is especially relevant. Sieder (2002), argues that: “During the twentieth century indigenous people in Mesoamerica and the central Andes 122esearch122 as peasants, or *campesinos*, to defend and secure land resources. They were 122esearch122 by civilian and military elites in favour of nationalist 122esearch122122122 projects, guided by a developmentalist ethos, which varied from revolutionary to counterrevolutionary in intent, depending on the country in question” (p. 2). The movements that Sieder identifies are those in which indigenous populations exist within, and fight against, the neoliberal state. The movements were born to fight the “discursive egalitarianism, however, [which] was sharply at odds with the political and economic vision of the nineteenth century liberal modernisers” (Sieder, 2002, p. 5). Brockett (1991) likewise points to the presence or absence of political opportunity within the neoliberal state; that is, those groups with more political opportunity have a greater ability to mobilize, and then subsequently mobilize allies, therefore growing their movement. Here, I note that this latter research aligns well with broader political science research into how political opportunity structures shape political protest participation and behaviors (Kitschelt, 1986).

Following a discussion of internal critiques of the neoliberal state, there is a natural pivot to political participation, as we seek to understand the options of changing the state internally. The political participation protest literature, which assesses the success and failures of indigenous protests in garnering new political participation through political

⁴⁵ The body of peasant mobilization literature refers to that which covers mostly indigenous movements in Latin America, mostly after the Second World War. It is so named because the label of “indigenous” was not popularized across Latin America until the 1990s; instead, many indigenous movements characterized themselves as peasant movements (Brockett, 1991).

parties or organizations, is largely focused on quantifying the fluctuating percentages of indigenous peoples in politics (Vogt, 2016). In this vein, these success and failures are directly tied to a proliferation of new and different political parties associated with indigenous protest movements that have successfully gained political representation (Simmons, 2016b; Perrault, 2008; Perrault, 2006). Critically, many scholars (e.g., Postero, 2005; Vogt, 2016) have identified commonalities in the degree of electoral successes that can occur after indigenous movements. That is, particular factors that characterize indigenous protest movements can lead to varying levels of indigenous political participation after the protest itself is complete. These factors include unity within the movement itself (O'Donnell, 1986), the intersectionality of ethnic groups participating in the movement (Vogt, 2016), and the state's potential to support descriptive representation (Vogt, 2016).

Much of the existing literature on political participation in Latin America after indigenous protest movements is focused on election outcomes (Van Cott, 2000; Birnir, 2004). This is because a tangible method for tracing motivators of the original mobilization and how that became a political, electoral force in the state can be seen in final election outcomes (Vogt, 2016). It is true that understanding the electoral and political successes of these indigenous movements is critical, both for a historical understanding of the ramifications of the protest and for a potential lesson to future movements that may want to utilize these lessons. However, simply exploring the electoral outcomes of indigenous protests in Latin America is only part of a greater interrogation.

4.3.2. Indigenous Protest Effectiveness

The second body of literature that is relevant to understanding indigenous mobilization revolves around the source(s) of (in)effectiveness in indigenous protest movements. Essentially, this literature attempts to identify specific variables that make some protests more “successful” than others. Evidently, the concept of success will vary from protest to protest, but this Chapter conceptualizes success based on the idea that the original aims of the protest were, to some degree, achieved (Kingstone, Young and Aubrey, 2013; Rich, 2020; Fisher, 1994). The current literature that examines protest effectiveness cites a variety of factors in determining protest success.

Kingstone, Young, and Aubrey (2013) argue that, in part, protests in Latin America are more likely to succeed when they incorporate “broad coalitions” when protesting against privatization of symbolic resources (p. 95). However, they add a second layer to their argument that protests are more likely to achieve their aims “when civil rights are protected but political representation is weak” (Kingstone, Young, and Aubrey, 2013, p. 95). Rich (2020) agrees that organizational heterogeneity can benefit protest movements in achieving their aims. She argues that it is actually the structure of the organization that greatly alters the outcome and defines heterogeneity in the differences of how activist networks can combine strategies to form strategic coalitions within indigenous communities (Rich, 2020).

Extant literature also argues that indigenous protests are more effective when the issue that sparks the protest is already symbolically important to the people protesting (Fisher, 1994; Simmons, 2016; Simmons, 2016b). In his study of the Kayapó’s efforts to

protect the Amazon in Brazil, Fisher (1994) points out that their protests have been successful in part due to the “the resiliency of their cultural traditions which flourish only in harmony with the tropical forest” (p. 221). He argues that the threat of their culturally significant homeland allowed for “convergent interests in agitating for changed policies and safeguards against ecological devastation” (Fisher, 1994, p. 221) that lead to successful government protection of part of the Kayapó homelands. Simmons similarly identifies the idea that indigenous protests are more successful when there is a physical symbolic resource holding the protest together. To this end, she argues that: “When whatever is being marketized symbolizes imagined and/or quotidian communities that reach beyond particular occupational, sectoral, or class categories, perceived threats to community can cross cleavages and create the conditions of possibility for broad-based mobilization” (Simmons, 2016, p. 41).

Yet, as with the first body of literature explored above, one area of protest success that has not yet been explored is the role of indigenous languages in protest movement effectiveness. This is surprising given that it is well documented that external threats to core resources, including symbolic resources such as indigenous culture, put a temporary stop to deep-seated social cleavages amongst potential protest allies (Atkin, 2003; Zittoun et al, 2003; Simmons, 2016; Simmons, 2016b). These external threats accordingly create cohesive social movements from disjointed political actors, who may not have otherwise banded together to fight for the same cause. When faced with a common enemy, an incredibly varied set of socio-political actors unites to defeat that enemy. Yet, this past research has primarily shown these protest dynamics in relation to threats to core natural

resources such as water (e.g., in the case of Bolivia's water war⁴⁶) or culturally significant food (in)security (in the case of Mexico⁴⁷). However, my contention is that other symbolic resources are worth exploring outside of those dependent on a physical or environmental manifestation, including language.

4.3.3. Symbolic Resources and Language in Indigenous Protest

To summarize, although the extant protest literature highlights many of the critical elements of understanding the sources and motivations for indigenous protests in Latin America, this literature has given surprisingly little attention to an incredibly important variable with potential to enhance our understanding of both the determinants and outcomes of these movements: indigenous language. Indigenous language as a symbolic resource is important and effective in protest mobilization and participation. Language, as a symbolic resource, *has* the power to support budding mobilization until it becomes fully-fledged protest, even if the protests themselves are not centered on protecting indigenous language. Its power extends beyond that. Language is a symbolic resource that can act as a tool to unify and a cause to protect. Indigenous protests cannot and should not be understood without this linguistic element.

In this vein, indigenous language usage is a key mechanism for our understandings of the intricacies of what makes protests effective. Extant literature proves that language – and language choice – is incredibly central to indigenous culture in Latin America and

⁴⁶ See (Simmons, 2016).

⁴⁷ See (Simmons, 2016b).

elsewhere (Salvatore, 1993; Liu and Pizzi, 2016; Safran and Liu, 2012). Because these languages are an omnipresent symbolic resource, they are inevitably intertwined with every indigenous protest (Salvatore, 1993; Liu, 2016). Language choice is political, inherently inclusionary, or exclusionary. The intersection of symbolic resources and language yields critical insight into people's relationships with those resources, both physical and symbolic, as something deeply personal (Liu, 2016). This intertwined nature of language and symbolic resources creates an especially acute problem in Latin America. With the two concepts inextricable, when one is threatened, the other has the potential to face the same consequences. Indeed, the loss of both a culturally and politically significant piece of their community could be disastrous for indigenous communities across the region. In the next section of this Chapter, I propose my original theoretical framework for understanding the role of indigenous language as a symbolic resource in the success of political protest in Latin America.

4.4. Theoretical Framework

In this Chapter, I contend that more diverse languages among indigenous protest movements signals to government actors that protestors are relatively more motivated and capable of overcoming collective action problems, thus encouraging the government to make more concessions than otherwise. This section of the Chapter will explore my argument surrounding the mechanisms behind how indigenous groups in Latin America protect their culture, how indigenous protesters use their language as a unifying or

disunifying factor when participating in protests, and why identity politics is such a decisive factor in the success or failure of these movements⁴⁸.

Before exploring these mechanisms fully, there are several concepts that are important to highlight. As a general understanding of protests, particularly in Latin America, it is important to note that the presence of a symbolic resource as part of the protestors' contention with the state can give rise to more diverse protests (Otto and Böhm, 2006; Graham, 2004; Zittoun et al., 2003). This is because protests centered on symbolic resources have the ability to “establish a new discourse in terms of regarding the people ... as active agents for making decisions about how public services should be governed and run” (Otto and Böhm, 2006, p. 300). Symbolic resources draw heterogenous protestors together in circumstances that threaten an essentially unavoidable part of their *identity*, rather than an alternative type of protest, where groups may simply join, but keep their identities independent of both one another and the purpose of the protest (Graham, 2004; Zittoun et al., 2003).

Furthermore, I return to the idea that heterogenous protests serve as a stronger signal to national governments that protestors are seriously invested in the issue or policy that they are protesting, relative to homogenous protests (Piazza and Wang, 2020; Verhulst

⁴⁸ Here, I would like to highlight the potentially confounding role of geography. That is, there is the potential for movements that have a greater geographic scope are also more likely to be more linguistically diverse. I acknowledge that many other protest factors may correlate with protest language diversity, such as overall protest size, protest geographic breadth, protest intensity (in terms of levels of violence and the like) and may also affect protest success. In particular, more language diversity could simply be an indication of larger protest size. However, I control for all of these variables in my statistical analysis. This is also discussed in the body of my Chapter. However, I argue that indigenous diversity acts on top of those, moderating (i.e., intensifying) their respective effects in compelling adequate government responses. This is also reflected later on in the Chapter, in my statistical analysis.

and Walgrave, 2009; Pierskalla, 2009; Aytacı et al., 2017). Heterogeneity in protests – in general, not just specifically in the instances of symbolic resources and indigenous language speakers – signals to national governments that protestors are avoiding any potential internal sources of derailment of said protests and are instead overcoming the types of collective action problems that would otherwise be expected to plague such protests (Piazza and Wang, 2020; Verhulst and Walgrave, 2009). These signals to the national government often lead to more productive discussions and eventual successful implementation of policy concessions or concrete solutions to the problems around which the protestors have organized in the first place (Pierskalla, 2009; Aytacı et al., 2017). This is because governments are more likely to listen, make concessions, and implement solutions when they face pressure from multiple politico-socioeconomic groups than if they perceive a “lone wolf” group protesting a single issue (Piazza and Wang, 2020; Verhulst and Walgrave, 2009).

To explore this concept further, I turn to governments’ decision-making processes in more depth. Throughout any protest movement, national governments must decide when (if at all) to make concessions or, alternatively, to repress or reject protestor demands (Pierskalla, 2009; Aytacı et al., 2017). In part, these decisions hinge on how likely the government thinks that protestors will be able to maintain (or expand) their protests beyond that moment. Governments repeatedly return to the cost-benefit analysis of responding to protests as these protests continue to evolve (Aytacı et al., 2017). In cases of heterogeneous protests with myriad indigenous language groups, there is a clear signal to the government that protestors have actively worked to overcome the collective action problem associated

with coordinating across group identities and are therefore more likely to continue (or even expand) the protests in the future. In this sense, this is a story about the government using the information at present to make a strategic prediction about how the future will unfold if there is a lack of cooperation with the protestors.

While there are lots of potential sources of protest movement heterogeneity, heterogeneity among Latin American indigenous protests, specifically, is likely to be best captured by different indigenous language groups. Communication via language is crucial to the organization and execution of any protest at the most elementary level (Salvatore, 1993; Liu and Pizzi, 2016). Protests need dates, times, locational focal points, and a semblance of organization, even if a degree of spontaneity is present. Protestors need to spread their message and advertise their cause using one or more language(s) (Maciel Reis et al., 2017). However, even beyond the basics of language as a necessity for communication, language has the potential to play a much larger role in both the effects and rates of success for indigenous protests in Latin America. Language itself is a symbolic resource to indigenous cultures (Matear, 2008). Because language is central to the separation and maintenance of indigenous identity in Latin America (and elsewhere), the languages themselves become symbolic resources, even if the direct communication across each language is difficult. This reflects on my previous definition of symbolic resources, which are resources with deeper, unifying meanings for a culture or a group of cultures. To expand on this point, language itself as a symbolic resource become critical in the success and effectiveness of protests, both as a symbolic resource that can be threatened and as a force to bring protestors together.

With these clarifications in mind, the mechanism behind my argument is relatively intuitive. Indigenous protests are a common facet of politics in Latin America, with a long and established history. Despite experiencing varied success of their goals over time, indigenous groups have found that protests are an effective way to garner attention from the state for their causes at the national level. Protests that are motivated by threats to symbolic resources that are meaningful to indigenous communities are more likely to be successful than those that do not. Furthermore, protests that are more heterogeneous are more likely to be successful than those that are homogenous. It therefore follows that in the Latin American context indigenous protests that incorporate language—a key source of both heterogeneity (to outside observers) and symbolic unification (to indigenous groups) – as a main facet of their protests are more likely to be successful than those that do not. This is the synthesis of the two ideas that more heterogeneity equates to more success, and more focus on symbolic resources equates to more success. Therefore, language – and more specifically, increased language heterogeneity – as a symbolic resource equates to more success.

In essence, the effectiveness of indigenous protests will be enhanced by circumstances of more linguistic diversity among protesters because of the political power that linguistic choice and independence holds as a symbolic resource. Thus, I present my hypothesis that:

H₁: Indigenous protests that involve high rates of indigenous language diversity (i.e., heterogeneity) among protestors will exhibit greater effectiveness with respect

to government protest accommodation, relative to indigenous protests that involve relatively low levels of indigenous language diversity.

In the section that follows, I will outline a variety of case-based evidence to evaluate the empirical applicability and soundness of the previously explained theoretical framework. Following this, I will conduct a cross-national quantitative analysis, which enables me to test my hypothesis at a fine-grained temporal level, across all of Latin America, and with highly granular data on protest actions and government responses to those actions. However, this quantitative analysis crucially rests on an assumption that indigenous protests arising in countries with more linguistic heterogeneity will inherently experience more linguistically heterogeneous protests. This is not always the case within linguistically diverse Latin American countries, and even some linguistically homogeneous Latin American countries could at times experience linguistically diverse protests. Accordingly, I will better explore the micro foundations of indigenous protests via the illustrative case of Chile.

4.5. In Cold Blood⁴⁹: The Council of All the Mapuche Land

4.5.1. Using the Chilean Case Study to Understand Protests in Latin America

An analysis of the Mapuche struggle against various Chilean governments in the post-Pinochet era will allow me to better unpack the within-country mechanisms and processes underlying the role of language heterogeneity in protest success. This is in contrast to the quantitative analysis that appears further below, which assumes that language varies in its unifying potential depending on country variation in the heterogeneity of indigenous languages, both cross-nationally and over time. Importantly, this case study will allow me to hold some potentially confounding explanations (e.g., problem structure, time, geographic breadth, political context, etc.) constant in order to ensure the validity of my analysis. In particular, this specific case study allows me to explore how government protest response changes in relation to the same protest movement *over time*, and especially in relation to the changing language heterogeneity of this particular indigenous protest movement *over time*.

In Chile, the Council of All the Mapuche Land has seen a lack of definitive, and somewhat intermittent, success in achieving movement goals over its time period of activity— which has often been punctuated by protest and violence (Carruthers and Rodriguez, 2009). The Mapuche have historically defined themselves as a protest group against what they deem to be the illegal occupation of their lands by the Chilean

⁴⁹ This title comes from: “‘We have been trampled by this racist Chilean state, which oppresses us. The police force represses all Mapuche people and they shoot at us in cold blood.’ This comment came from a 16-year-old boy describing a police crackdown of which he and other native peasant farmers were victims in the region of Araucanía, 680 km south of Santiago, during an eviction of several indigenous communities occupying land that they claim as their ancestral property” (Jarroud, 2012).

government; however, they have only been somewhat successful in both unifying their ideology and the recovery of their lands (Carruthers and Rodriguez, 2009; Boccara, 2002). Violence has been perpetrated extensively by both sides in this case (Carruthers and Rodriguez, 2009; Boccara, 2002). However, alongside these patterns, Mapuche-backed protests have also grown broader and more linguistically heterogeneous over time, leading to an expectation of increased protest success during the lifespan of the All the Mapuche Land movement. This analysis will evaluate this expectation with an eye towards providing further insight into how and where indigenous language politics have intersected with protests.

4.5.2. A Brief Historical Overview of the Mapuche-Chilean State Relationship

The Mapuche have an historical reputation for powerful and successful resistance to any Chilean government that is not their own (Sznajder, 2003). The arrival of the Spanish colonizers in modern Chile and Argentina in the late sixteenth century actually spurred the “formation” of the Mapuche, who had previously lived in a relatively unorganized society with little overarching political structure outside of their own families (Sznajder, 2003). Upon finding a common threat in Spanish colonizers, the Mapuche began to organize into a distinctly heterogeneous group in the sixteenth and seventeenth centuries (Sznajder, 2003). As Funk (2012) notes: “The Mapuche – itself a meta-category for numerous smaller groups – comprise approximately 90 percent of the indigenous in Chile and are the third-largest indigenous group in South America” (p. 4). As will be elaborated on more below and like many other indigenous groups, the Mapuche remain culturally and linguistically heterogeneous. The Mapuche people live throughout Chile and

Argentina, with populations concentrated along the Chilean-Argentinian border in the northern and southern region of the state (Funk, 2012).

This heterogeneity notwithstanding, one commonality amongst the Mapuche since the Spanish colonial era is their history of “violently resist[ing] the Spanish invasion of their land to a greater degree than any other Indian people in America” (Sznajder, 2003, p. 17). Their patterns and strategies of resistance may have varied over time, but their staunch dedication to autonomy and independence remain unchanged (Sznajder, 2003). Yet, despite centuries of struggle, the Mapuche still represented about five percent of Chile’s total population around the turn of the twenty-first century⁵⁰ (Sznajder, 2003).

To bring the discussion to the modern era, the Mapuche suffered greatly at the hands of former Chilean dictator Augusto Pinochet (in power from 1973-1990), who violently persecuted the Mapuche in great numbers because of their (perceived⁵¹) association with leftist movements (Sznajder, 2003; Boccara, 2002). The Mapuche were part of forcible assimilation plans under the Pinochet regime, and many lost their lives defending their identity (Boccara, 2002). After the end of Pinochet’s reign in Chile, the newly elected democratic regimes of the 1990s failed to make significant progress in undoing the horror of the Pinochet era, and indeed, introduced a number of new issues over symbolic identity and autonomy in the Mapuche regions (Sznajder, 2003).

Incidentally, the end of the Pinochet era coincided with the United Nations’ International

⁵⁰ This is certainly an estimate. The Chilean government no longer allows a “Mapuche” category on the national census, and so this is estimated from the number of Mapuche speakers and past census data (Funk, 2012; Ellington, 2021).

⁵¹ The Mapuche benefitted from many of Allende’s land reforms, which is the primary reason that Pinochet perceived them to be agents of the left (Sznajder, 2003)

Year of the World's Indigenous People (1993), and a global push to recognize and protect indigenous rights (United Nations). This tumultuous era serves as the backdrop for the Mapuche protests from 1990 through the present, which are discussed in the following section.

4.5.3. Protest and Language in Mapuche Land

Under the new democratic regimes in Chile in 1990, the Mapuche continued their fight for autonomy. The Mapuches' language is classified as Mapudungun. Historically, the Mapudungun linguistic group encompass eight major dialects, with speakers in modern-day Chile and Argentina (Funk, 2012). After centuries of threats, the Mapuche had made attempts to somewhat consolidate their linguistic and cultural traditions in order to save the Mapuche way of life (Sznajder, 2003; Carter, 2010). Yet, in both the linguistic and cultural senses, the Mapuche identities, on which they capitalize to effectively perpetrate collective bargaining, is actually artificial; the Mapuche are indeed linguistically and culturally heterogenous⁵² (Haughney, 2006). To this day, Mapuche peoples live in both Chile and Argentina, separated by artificial borders two centuries ago (Funk, 2012). Their multiple dialects have certainly changed over time, and remain influenced by other local indigenous groups, sometimes making inter-dialect communication difficult (Sadowsky, et al., 2013). Their heterogeneity helps define the Mapuche struggle for autonomy (Carter, 2010).

⁵² Although it should be noted here that Mapuche culture (and language) has evolved greatly over time and has converged and diverged at different points (Haughney, 2006).

As Carter (2010) argues: “What has clearly emerged among Mapuche activists [after Pinochet] is a discourse of autonomy and self-determination in place of one that demands a place for the Mapuche within the Chilean nation. This has implied a new meaning of ‘land’ as a source not only of agricultural production and living space, but as territory belonging to a people within which they demand the right to their own institutions, control of resources, and cultural freedom” (p. 73). Here, Carter refers to the symbolic nature of cultural space for the Mapuches, and why that is worth protesting the government. In their struggle for this autonomy and self-determination, the Mapuche – diverse in themselves – have allied with various other indigenous and non-indigenous groups to protest various government incursions into Mapuche symbolic resources.

Haughney (2006) speaks at length about Mapuche protests and the incorporation of symbolic resources affecting government repression tactics. She effectively argues that Mapuche focus on symbolic resources “creates a dynamic that partially counteracts the social atomization because subordinated peoples can retain zones of social and cultural control that provide the means for a critique of the relations of domination and a vision of an alternative system” (Haughney, 2006, p. 214). Since the collapse of the Pinochet regime, the Mapuches have protested, both in marches and through violence, state incursion into sites of cultural importance for varieties of Mapudungun speakers, even though they do not form a cohesive ethnic identity (Haughney, 2006). This reinforces my earlier contention that the Mapuche ethnic identity, on which they capitalize to effectively perpetrate collective bargaining, is actually artificial; the Mapuche are linguistically (and culturally) heterogenous, despite their common grouping as a single political actor

(Haughney, 2006). However, as the Mapuche banded together to protest government incursion into culturally significant spaces for these distinct groups, indigenous leaders increasingly came together to voice their opposition as a unified front (Rodríguez and Carruthers, 2008). This represents an increasing shift over time in Mapuche protests in terms of their incorporating larger shares of Mapuche dialects and hence an increase in language heterogeneity.

Against this backdrop, it is also worth unpacking the distinct role that these shifts in language heterogeneity played in the government response to these Mapuche protests. The government has chosen a variety of paths over the last four decades of Mapuche struggles for autonomy, rights, and access to government. Directly following the Pinochet era, when Mapuche protest efforts were relatively narrow with respect to Mapuche dialects and coordination with other indigenous and linguistic groups, Mapuche protestors were labelled and prosecuted under anti-terrorism laws that singled them out as extremists for any acts that protected their culture (Spain and Gatehouse, 2011). The government targeted a number of groups that were either ethnically Mapuche, spoke Mapudungun, or were even associated with Mapuche activism, and legally persecuted them for decades after the end of the Pinochet regime. Indeed, the targeting was so severe that the Inter-American Court of Human Rights⁵³ prosecuted Chile in 2011 for their severely “racist” treatment of the Mapuche and their allies (Spain and Gatehouse, 2011). Spain and Gatehouse report some of the mistreatment of the Mapuche in their early struggles after Pinochet:

⁵³ An arm of the Organization of the American States (OAS)

The case highlighted by the court concerns two *lonkos* (Mapuche traditional leaders), Segundo Aniceto Norín Catriman and Pascual Huentequo Pichín Paillalao. Together with members of their families and supporters, they were arrested in March 2002 after a truck belonging to a former government minister, Juan Agustín Figueroa, was set alight near his property, the Fundo Nuncahue. Norn and Pichín were initially sentenced to 800 days imprisonment. After a lengthy series of hearings and appeals, they were acquitted, only for the Supreme Court to order a retrial in which they were given an even longer sentence -five years-for allegedly uttering terrorist threats against Figueroa. (2011, p. 2)

The various democratic regimes that followed Pinochet not only continued to repress Mapuche citizens as they demanded cultural and physical protection for themselves, but also were charged by the Inter-American Court of Human Rights with intentional racism and discrimination and led to the death and persecution of many Mapuche peoples. As one reporter argues: “For the Mapuche people the cost of mobilization in pursuit of their legitimate demands have been high: murder, law enforcement anti-terrorism, torture and cruelty, militarization of everyday life, indiscriminate repression ...” (Anon, 2012). These laws were enacted specifically to target the Mapuche peoples – and only the Mapuche peoples. Because of the specificity of these laws, the ensuing protests against these laws and relevant government bodies were relatively homogenous (Richards, 2010). Although the Mapuche have linguistic and cultural heterogeneity within their own group, these protests did not incorporate many proximate linguistic or cultural groups (Richards, 2010). This narrow participation was relatively ineffective in soliciting any change from the Chilean government; instead, it took a broader alliance to put a stop to Mapuche persecution.

Following the Inter-American Court of Human Rights' ruling mentioned above, and despite continued threats, the Mapuche have not stopped their protesting (Puelma, 2021). Instead, the Mapuche have allied themselves with other socio-political and indigenous language groups to work for their self-determination, including representation and protections under the new Constitution (Puelma, 2021). The most recent 2019 protests in Chile saw Diaguita, Aymara, Campo Maripe, Rapa Nui, and Colla all waving the Mapuche *Wenufoye* (flag) as a symbol of the call for a new plurinational Chile (Miller, 2021; Carrahar-Kang, 2019; Anon, 2020; Blair, 2019). Perhaps at least partially as a result, the Chilean government has chosen a relatively peaceful incorporation of the Mapuche and the similarly situated Kawésqar peoples over the last five years, after they banded their many disparate groups together to lobby for a re-write of the Chilean Constitution (McGowan, 2021). Indeed, these latter protests were sparked originally by high school students who were frustrated with rising metro costs in Santiago (Loofbourow, 2019). This then snowballed into general protests about the rampant and vicious economic inequality that has plagued Chile since the end of the Pinochet dictatorship (Loofbourow, 2019). This Chapter does not claim that the 2019 protests were solely indigenous. Some of the other groups involved include student activists, activists for women's rights, and anti-corruption groups (Loofbourow, 2019). However, there was a notable indigenous contingency that pressured the Chilean government to call for the plebiscite that put handed the Mapuche and their allies unprecedented power in Chilean democracy (Loofbourow, 2019). The months of protests culminated in "the ultimate concession—the offer to rewrite the country's constitution" (Bremmer, 2019), which Bremmer characterized as "a desperate

move by Chile's president to satisfy the ever-changing demands of protestors and buy himself some time" (2019).

In sum, these recent changes to the Chilean constitution represent a clear example of indigenous protest success, as opposed to government repression. As noted in the paragraph above, this positive government response came about in no small part due to the broader 2019 uprisings, which fought against a myriad of social, political, and economic structures dating back to the Pinochet era (McGowan, 2021). Yet the Mapuche and other indigenous groups not only helped to spur and expand these 2019 protests, but also participated in a manner that was far more linguistically unified (i.e., across indigenous and non-indigenous language groups) than were the relatively narrow Mapuche protests during previous decades. Indeed, as perhaps one of the clearest signals of the unifying role of indigenous language as a symbolic resource, McGowan notes: "When the 2019 anti-government protests erupted, the Mapuche Wenufoye flag was waved among crowds of city-dwelling Chileans. 'It was a symbol of [the broader] fight'" (2021, p. 2).

When contrasting 2019's patterns of protest accommodation against the patterns of repression that arose in response to the relatively more homogenous Mapuche protests during the Pinochet and post-Pinochet eras, we accordingly observe a shift in government responses to Mapuche protests: away from repression and towards cooperation. This illustrative case thereby suggests that the Chilean government changed its response to Mapuche demands from extreme repression towards concession *only after* the inclusion of heterogeneous linguistic and cultural group of protestors.

One reason that Mapuche protests were unsuccessful prior to 2019-2021 is that these protests were narrow in terms of demographic makeup. Prior to 2019, it was often just Mapuche peoples or only small number of related groups involved in any given protest. By contrast, the 2019-2021 protests saw indigenous participation significantly broaden (thus implying more indigenous language heterogeneity), and ultimately obtain more success. This is consistent with the core theory and hypothesis of this Chapter, which contended that indigenous protestors that use their shared indigenous language experiences as a unifying factor will improve the effectiveness and success rates of their protests. That being said, the broader (non-indigenous) participation of the 2019 protests in Chile—and other potential factors that likewise fall outside of my core theory—may have also contributed to this particular outcome. To rule out this potential confound, I now turn to a large N statistical analysis.

4.6. Quantitative Analysis

4.6.1. Data and Methods

Now that we have explored my illustrative case, I will now test my hypothesis with a large-N quantitative analysis to better evaluate both the generalizability and external validity of my theory.

4.6.2. Sample and dependent variable

The above hypothesis contends that the effectiveness of indigenous protests will be enhanced (alternatively: diminished) under circumstances of more (alternatively: less) linguistic diversity among protesters. For my quantitative analysis, I am accordingly

interested in assessing *changes* in Latin American government stances towards indigenous groups⁵⁴ in response to protests with higher linguistic heterogeneity. Under this framework, I interpret instances where a government's stance becomes more repressive as indicative of protest ineffectiveness; whereas government stances that become more conciliatory and cooperative towards indigenous protestors can be seen as evidence of enhanced protest effectiveness.

Considering the above contentions, the dependent variable for this analysis is operationalized as a measure of protest effectiveness. That is, my dependent variable is operationalized as the monthly changes in Latin American government stances towards protestors and associated citizen groups.⁵⁵ This dependent variable is designed to be closely tailored to my monthly protest intensity independent variable outlined further below, and accordingly does not directly distinguish between government responses to indigenous vs. non-indigenous protests or groups. In terms of operationalization, this dependent variable is derived from the Integrated Crisis Early Warning System (hereafter: ICEWS) database (Boschee et al., 2015). ICEWS is a political event dataset encompassing directed-dyadic political events between relevant state and non-state actors. This database codes individual events for all countries of the world⁵⁶, for the period 1995 – present according to a twenty-point CAMEO ontology of verbal and material events (Schrodt, Gerner, and Yilmaz,

⁵⁴ And related societal actors.

⁵⁵ I favor this dependent variable operationalization over an alternative measure of broader changes in government responses towards indigenous language groups because the latter (i) is unavailable at the monthly level for my full sample and (ii) would be less aligned with my protest-specific independent variable.

⁵⁶ Excluding domestic events from the United States

2009). These events are wide ranging in their categorical descriptions. Many encompass cooperative acts like the ceding of territory, expressions of intent to change a given policy, or the removal of a blockade. Others, by contrast, encompass more conflictive acts such as impositions of curfews, aerial bombings, or extreme repression.

Because of this Chapter's specific focus on Latin America in the contemporary era, I consider only part of the ICEWS dataset. My dependent variable, *government response*, draws from ICEWS's country-month data during the 1995-2018 period for the following Latin American countries: Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Uruguay, and Venezuela.⁵⁷

To format the ICEWS data into the country-month measure of *government response*, I first subset all ICEWS events to include only events arising between domestic source and target actors within the twenty Latin American countries mentioned above for the 1995-2018 period.⁵⁸ These events were then further subset to retain only those events arising between government actors as sources (i.e., initiators)⁵⁹ of an event and with

⁵⁷ Here, I make the intentional choice to exclude the Caribbean from this analysis. This is not because I believe it to be insignificant in regional studies and the wider political sciences. Instead, I exclude the Caribbean because I do not wish to overwrite their unique colonial past and modern political experiences. However, I should note, I do believe that the analysis I am carrying out here could be done in the Caribbean with a different structural framework.

⁵⁸ While ICEWS technically is available until 2021, the majority of my control variables are only available until 2018, leading me to limit my sample frame to 1995-2018.

⁵⁹ Specifically, events with ICEWS sector codes of 'Government', 'Military', 'Policy' or those with country-designations but blank sector codes. This is consistent with past work leveraging the ICEWS data to measure government repression (Bagozzi, Berliner, and Welch 2021).

civilians, protestors, and related groups as targets.⁶⁰ While the resultant source-target actor pairing and events may include government actions vis-à-vis non-protestors for some country-months, the protest context that they are aligned with further below helps to ensure that this is more directly capturing government actions vis-à-vis protestors and protest demands. After subsetting my events accordingly, I filtered out the minor number of duplicates using the common ‘one-a-day’ filtering technique (Beiler et al. 2016).

With this cleaned and de-duplicated data, I then aggregated all events to the country-month level, so as to generate a single 20-point index capturing the cooperative-to-conflictive scale of all government-directed actions towards citizens in any given month using a mean Goldstein Scale (Goldstein, 1992). A Goldstein scale of this sort is the appropriate, and indeed, a common, approach to operationalizing conflict-to-cooperative event-data interactions (e.g., Goldstein and Freeman, 1990; Reuveny and Kang, 1996). These scores range from -10 to 10, with more positive values implying more cooperative stances between a source and target actor. Conversely, more negative values imply more conflictive stances between a source and target actor. Finally, these country-month, government-to-citizen Goldstein Scales were then transformed to capture this monthly change in *government response* from the previous month to the current month so as to evaluate changes in government stances towards citizens and protestors in light of recent protest events. My summary statistics for this measure (and all other variables from the analysis) appear in the appendix (Table C.1).

⁶⁰ Specifically, events with ICEWS sector codes of ‘General Population’, ‘Civilian’, ‘Social’, ‘Protestors’, ‘Mobs’, ‘Popular Opposition’, ‘Media’, ‘NGOs’ and ‘Business’. This again is consistent with past work leveraging the ICEWS data to measure government repression (Bagozzi, Berliner, and Welch 2021).

4.6.3. Independent Variables

I must interact two independent variables to test the hypothesis stated above. The first of these two variables corresponds to an event-count of protest events initiated by domestic non-state actors and targeting government actors in month $t-1$. To create this event count, I returned to the raw ICEWS data described above. As I did previously, I subset these data to correspond to only domestic events involving my twenty Latin American countries for the period 1995-2018. Following this, I retained all events arising from citizen or social domestic actors (including protestors) targeting government actors.⁶¹ Next, and unique to this particular variable, I subset my events to only include those corresponding to ICEWS' CAMEO action category of 14 (i.e., Protest events). After a similar de-duplication process as before, I aggregated all events to country-month counts to capture *protest intensity*. Then, I transformed this measure to correspond to the change in protest events from the previous month to the current month.⁶² Note that as is the case for my dependent variable above, this measure does not distinguish between indigenous and non-indigenous protests. My interacting this variable with the second independent variable below is intended to better capture this latter variation, albeit with the assumption that country(-time) variation in protests—when interacted with a country-year measure of

⁶¹ Using the same ICEWS source and target sectors to define these actors as described above.

⁶² As alternative measures of protest intensity, the robustness section alternatively considers the number of unique geographic protest locations in a given month rather than total country-wide protest events and the number of independent reports pertaining to the protest events retained here (i.e., as a measure of overall media attention to the protests that I consider, which can be seen as an imperfect proxy for the magnitude or size of each individual protest).

indigenous language heterogeneity—reflects variation in (heterogenous) indigenous protest participation for my sample.

My second independent variable corresponds to country-month measure of the linguistic diversity of indigenous groups within a particular country. I start by calculating the number of indigenous language speakers for each indigenous language across my 20 Latin American countries, for each year and month from 1995-2018. As in the past work of Ellington (2021) and Liu and Pizzi (2017), I draw my linguistic proficiency standards from the *Ethnologue* database. This dataset is somewhat more controversial than the ICEWS dataset and merits some explanation in its choice. *Ethnologue* tracks all seven thousand living languages across the world (Anon, *Ethnologue: Languages of the World*). To date, *Ethnologue* encompasses over eighty years in time series data for each country globally, although it has not always collected or released data annually (Anon, SIL International, 2018). At the time of writing, *Ethnologue* is in its twenty-fourth edition (Anon, *Ethnologue: Languages of the World*). However, the *Ethnologue* data used in the current analysis corresponds to data only through 2018 to better match the ICEWS-derived variables described above.

Like every database, *Ethnologue* has both strengths and weaknesses. The strengths are vast, including temporal longevity, the inclusion of secondary and “dead” languages, and an avoidance of reliance on ethnolinguistic fractionalization as a proxy for language. Nevertheless, *Ethnologue* still contains some problematic elements. For instances, not all languages are re-measured on an annual basis. Secondly, *Ethnologue* is run by SIL International, which is a religious (i.e., in this case, Christian) organization focused on

missionary work (Anon, 2018). Theoretically, this could, disturb the unbiased nature of the data collection⁶³. Overall, *Ethnologue* presents the best available raw data in terms of language disaggregation and temporal aggregation. Its time-varying, country-by-country itemization and cataloging system allows me to measure the frequency and variation of individual languages over time, rather than the usual variation in official or national language, or in ethnic population/ethnolinguistic fractionalization. Next, I expand these *Ethnologue* indigenous language data to the country-month level for combination with my additional variables and transform all data on indigenous language speakers into a single country-month measure of indigenous language diversity.

For my indigenous language diversity measure, I specifically employ a Herfindahl index transformation to capture the average indigenous speaker share (in terms of total number of speakers) of each indigenous language in a given country-month, weighted by speaker share. The measure accordingly takes into account both the number of indigenous languages in a country and the total number of speakers per language, making it preferable to alternatives such as a simple count of indigenous languages spoken by country. For interpretability, I re-code my resultant indigenous Herfindahl index to denote more diverse indigenous language environments with higher values and less diverse indigenous language environments with lower values. As such, *indigenous Herfindahl index*

⁶³ SIL could have ulterior motivations in developing *Ethnologue* beyond the academic or theoretical measurement of spoken language. I contend, however, that these potential effects are mitigated by the aforementioned third-party data collection. *Ethnologue*'s language records are mostly developed and verified from academic sources, rather than from missionaries working in the field. This helps to offset any concerns of *Ethnologue*'s broader agenda creeping into its measurement of language usage. SIL International is then limited in its influences besides the simple compilation of these records into the most comprehensive aggregate measures of language usage for each country and language over time in order to provide its audience with the most accurate records of language usage across the world

(*reversed*) ranges from 0-to-1, with values closer to 0 denoting countries with a single dominant indigenous language (e.g., El Salvador or Paraguay) and values closer to 1 denoting countries with many smaller indigenous language groups (e.g., Guatemala or Brazil).

To fully assess how changes in indigenous language diversity moderates the effect of protests on a government's stance towards protestors and associated social groups, I then interact *indigenous Herfindahl index (reversed)* with *protest intensity* to create *Protest x H-Index (reversed)*. Consistent with recommendations concerning the proper implementation and interpretation of interaction models (Brambor, Clark, and Golder 2006), I include not only *Protest x H-Index (reversed)* but also its constituent terms (i.e., *indigenous Herfindahl index (reversed)* and *protest intensity*) within all statistical models considered. While this interaction does not precisely allow me to verify whether active protestors in any particular country-month vary along the lines of *indigenous Herfindahl index*, I contend that this setup serves as a reasonable proxy in this large N context given coding constraints and note that my earlier qualitative analysis gives me more leverage in unpacking the linguistic diversity of specific protests.

4.6.4. Control Variables

As is necessary for any statistical analysis of the variety proposed here, I include a number of control variables within my main statistical models. I first seek to ensure that any change in the government's stance towards protestors in month *t* is not an artifact of broader change in the government's stance towards any non-governmental actor, nor to international interference in a given protest context. To address these concerns, I control

for each government's monthly Goldstein Scale-based stance towards all international actors (*gov-international 150research150*), employing the same first differencing approach as used for *protest intensity* and *government response* above to operationalize this measure as a change from $t-1$ to t .

I then add a set of country-year control variables to my models. Because larger Latin American countries have some tendency to contain more diverse indigenous language groups and speakers, I include controls for the (rescaled) number of national language- and indigenous-language speakers in all models. I next control for regime type, as measured by the Polity IV⁶⁴ Project (Marshall, Jaggers, and Gurr, 2018). This measure, hereafter *polity*, is a 21-point scale where the more negative values correspond to more authoritarian countries and more positive values to more democratic countries. I further add controls for GDP per capita (natural log), foreign direct investment as a share of GDP (*FDI*), and annual GDP per capita growth, as measured from the same World Bank's World Development Indicators dataset (World Bank 2016). These control variables account for potential domestic and international economic confounds. Finally, I account for demographic trends via (logged) total population and a measure of rural population as a share of all population, both obtained from the World Development Indicators (World Bank 2016).

⁶⁴ The robustness section further below alternatively considers a set of specifications that employ V-Dem's (Coppedge et al. 2021) Electoral Democracy Index (*V-Dem EDI*) in place of Polity, finding that controlling for this alternate operationalization of democracy does not affect the key conclusions of my primary analysis.

4.6.5. Statistical Models

My modelling setup corresponds to a pairing of first-differences and fixed effects. As noted above, my key protest and government response variables, and other monthly controls, are each first-differenced at the monthly level. This allows me to account for any country-specific trends in potential confounders. I then add my additional country-year controls, and country fixed effects (and at times, year or month fixed effects in my robustness section). The latter (country-level) fixed effects allow me to further control for any confounds that may be correlated with changes in protest, government response, and language heterogeneity over time. I then estimate this framework using linear regression with standard errors clustered by country.

For the above modelling framework, I present my estimates in two stages. First, I report a smaller model specification that includes only a select number of control variables. Then, I report a larger model specification that includes all control variables mentioned above, albeit with a slightly smaller N due to the listwise deletion that these additional control variables entail. For *each* specification, I report not only a standard (baseline) linear model, but also a pair of linear models that additionally include country random effects or country fixed effects (my final preferred specification). These adjustments, alongside the clustered standard errors and first differencing mentioned above, help me to isolate the direct effects of my independent variables in the panel data context considered here, while also demonstrating that my findings do not hinge on specific modelling decisions therein. My robustness section further explores the sensitivity of these results to alternate modelling decisions and controls.

4.7. Results

My main model results are reported in Table 4.1 below. Focusing first on the constitutive terms for my primary interaction of interest, one can note that the coefficient estimate for *protest intensity* is negative and significant in all models. In light of my interaction, this implies that for country-months whose *indigenous H-index (reversed)* is zero (i.e., for countries with a single group of, or no, indigenous language speakers) an increase in one additional protest event in month t relative to month $t-1$ is associated with a statistically significant ($p < .001$) monthly decrease in government response of -0.185 on the Goldstein Scale (i.e., a significant shift towards more government repression). At the same time, the constituent term for *indigenous H-index (reversed)* is not statistically significant in any specification within Table 4.1. This implies that when there is zero change in *protest intensity* from month $t-1$ to t , *indigenous H-index (reversed)* has no reliable effect on the government response.

With these constitutive effects in mind, the coefficient estimate on *Protest x H-Index (Reversed)* in Table 4.1 provides a more direct test of my hypothesis. I find in this case that the coefficient estimate for *Protest X H-Index (Reversed)* is positive and statistically significant ($p < .001$) in every model specification reported in Table 4.1. In line with my hypothesis, this suggests that indigenous language diversity moderates the effect of a monthly change in protest intensity on the consequent change in government response. Put differently, the positive and significant interaction term in this case suggests that the repression-inducing effect of protest intensity is ameliorated—and potentially reversed—in instances of high(er) indigenous language diversity. That being said, full interpretation

of this interaction effect must be done graphically via marginal effect plotting (Brambor, Clark, and Golder 2006), which is presented further below.

Before turning to this plotted marginal effect, I briefly note that a number of additional control variables are statistically significant in Table 4.1. *Gov-international Goldstein* is positive and statistically significant ($p < .10$ or $p < .05$) in all models in Table 4.1, implying that monthly changes in a government's conflictive-to-cooperative stance towards international actors is positively associated with the government's stance towards domestic actors. The total number of *indigenous language speakers* and *national language speakers* at times exhibit reliable positive or negative effects on *government response*, respectively. However, these effects are not consistently significant across all specifications in Table 4.1 and are hence not viewed as reliable.

Table 4.1: Country-Month Linear Models of Government Protest Response for Latin America, 1995-2018

	Model 1 OLS	Model 2 RE	Model 3 FE	Model 4 OLS	Model 5 RE	Model 6 FE
Protest Intensity	-0.185*** (0.047)	-0.185*** (0.047)	-0.185*** (0.047)	-0.216*** (0.041)	-0.216*** (0.041)	-0.216*** (0.041)
Indig. H-index (Reversed)	-0.013 (0.014)	-0.022 (0.066)	-0.013 (0.014)	-0.013 (0.017)	-0.011 (0.068)	-0.013 (0.017)
Protest x H-Index (Reversed)	0.171*** (0.045)	0.171*** (0.045)	0.171*** (0.045)	0.190*** (0.043)	0.190*** (0.043)	0.190*** (0.043)
Gov-International Goldstein	0.053* (0.026)	0.053* (0.026)	0.053** (0.026)	0.050* (0.027)	0.050* (0.027)	0.050* (0.027)
National Lang. Speakers	0.107 (0.069)	-0.402* (0.216)	0.107 (0.069)	0.122 (0.115)	-0.382 (0.267)	0.122 (0.115)
Indigenous Lang. Speakers	0.000* (0.000)	0.001 (0.001)	0.000* (0.000)	0.000* (0.000)	0.001 (0.001)	0.000** (0.000)
Polity	-0.002 (0.002)	0.001 (0.007)	-0.002 (0.002)	0.000 (0.003)	0.001 (0.008)	0.000 (0.003)
FDI				0.000 (0.003)	-0.002 (0.005)	0.000 (0.003)
GDP Per Capita Growth				-0.003 (0.004)	-0.003 (0.005)	-0.003 (0.004)
Ln GDP Per Capita				0.012 (0.009)	0.048 (0.069)	0.012 (0.009)
Log Population				-0.005 (0.005)	-0.134 (0.179)	-0.005 (0.005)
Rural Population Percentage				0.000 (0.000)	-0.003 (0.002)	0.000 (0.000)
Constant	0.008 (0.017)	-0.009 (0.054)	0.008 (0.017)	0.120 (0.081)	2.385 (3.083)	0.120 (0.081)
Observations	5,225	5,225	5,225	5,177	5,177	5,177
Root Mean Square Error	3.571	3.571	3.571	3.580	3.580	3.580

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

To better assess the combined interactive effect of *Protest x H-Index (Reversed)*, *protest intensity*, and *indigenous h-index (reversed)*, I follow Brambor, Clark, and Golder (2006) to plot the marginal effect of a one unit increase in *protest intensity* (i.e., one additional monthly protest from month *t-1* to *t*) on *government response* across the full range of *indigenous h-index*. I use Model 6 in Table 4.1 to derive this effect. This effect is then plotted, with 95% confidence intervals, in Figure 4.1 below. In line with my Hypothesis, Figure 4.1 demonstrates that the repression-inducing effect of one additional protest decreases (becomes less negative) as one *increases indigenous h-index (reversed)* from its minimum of 0 (implying no or one group of indigenous language speakers) to its maximum of 1 (implying many indigenous language speaking groups). That is, monthly increases in protests elicit a more cooperative government response towards citizens and protesters when the country (and potentially, protest) context involves a more diverse set of indigenous language speaking groups. This finding is accordingly consistent with the hypothesis and theory posited above.

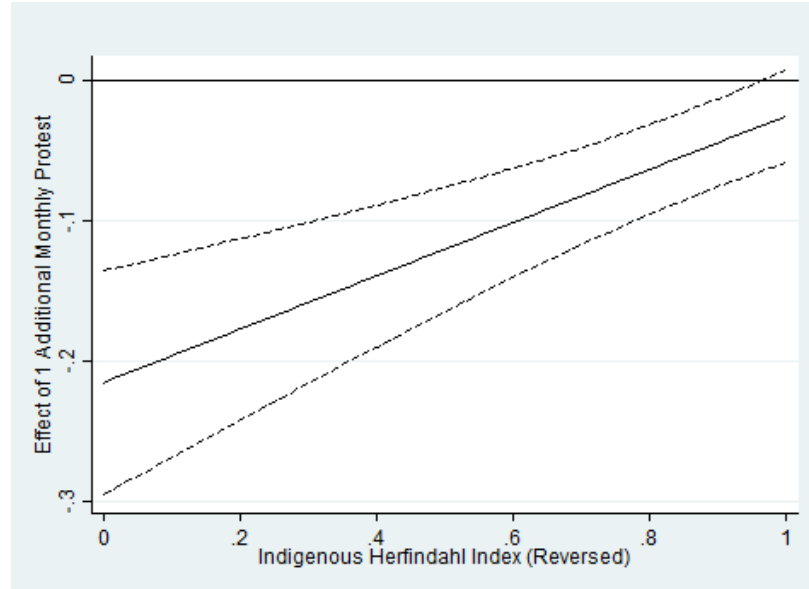


Figure 4.1: Marginal Effect of Protest on Government Response, As Moderated by Indigenous Language Diversity

4.7.1. Robustness Assessments

The findings presented above are robust to a number of alternative variable and/or model specifications. All robustness tables are presented in Appendix C and are summarized here. Firstly, I verify that my results are robust to additional sample-wide temporal shocks (e.g., regional economic crises, or the United Nations’ Declaration on the Rights of Indigenous Peoples) by adding year fixed effects to each specification reported in Table 4.1. These year fixed effects models, reported in Table C.2 of the appendix, demonstrate that my primary findings remain after accounting for this temporal concern. Similarly, Table C.3 seeks to address concerns over seasonal variation contributing to my

core findings by adding month fixed effects to all model specifications. As above, the addition of these temporal fixed effects does not affect the robustness of my key findings. Another concern with my primary models in Table 4.1 is that my controls for national and indigenous language speakers aren't fully capturing the omitted variable bias potential of these features given their non-logged form. Table C.4 accordingly replaces these two controls with equivalent logged versions, finding that my primary findings remain in this case.

Next, I seek to verify the robustness of my indigenous protest findings by incorporating an alternate measure of protest intensity.⁶⁵ In this case, and rather than using a monthly change in the nationwide count of protests, I instead employ a monthly change in the nationwide count of unique protest event locations. This alternate protest measure accordingly captures geographic protest breadth as opposed to aggregate country-level protest event intensity. As such, it is an alternative means of measuring (monthly change in) protest size or breadth. Table C.5 demonstrates that my findings remain when using this alternate protest operationalization. Table C.6 then considers an additional manner of accounting for protest size. In this case, I return to my raw ICEWS protest event data, and re-aggregate these protest events to the country-month level when omitting the 'one-a-day' deduplication (filtering) step described earlier. Retaining duplicate events in this fashion accordingly captures variation in intensity of media attention to individual protests, which can be seen as a(n imperfect) proxy for protest size. This alternate aggregation is again

⁶⁵ Recall that my primary quantitative measure of *protest intensity* is derived from each sample country's total monthly protests, without reference to variation in indigenous groups' participation in protests, or protest size.

converted to a monthly change in country-year counts and is then entered as an independent variable and interaction in Table C.6. As seen in this Table, my core findings again hold.

Lastly, I present two final robustness tests. First, I can note that Uruguay represents an extreme case for my sample given its relative absence of indigenous speakers based on many years for my *Ethnologue* data. Table C.7 accordingly re-estimates all models after omitting Uruguay from the sample, demonstrating that my decision to include or omit Uruguay has now bearing on my primary findings. Finally, as alluded to above, an alternative control for democracy for my country-year sample is V-Dem's Electoral Democracy Index (*V-Dem EDI*). Table C.8 illustrates that my findings are robust to the inclusion of *V-Dem EDI* as a control in place of *Polity*.

4.8. Conclusion

Political protests cannot be understood without language as a centrepiece. This Chapter seeks to evaluate whether indigenous language heterogeneity plays a central role in government response to political protests, and ultimately posits and finds that language is indeed a key symbolic resource in these protests. This focus on indigenous language heterogeneity is then evaluated with case-based evidence from Chile, which suggest that increasing heterogeneity in indigenous languages does also increase government likelihood to concede to demands and decrease the likelihood of repression. The effectiveness of multiple indigenous languages within Latin American protest movements is then further evaluated with an original dataset and a series of country-month difference-in-difference regressions. These regressions ultimately show that my hypothesis about the role of

indigenous languages is indeed supported. Accordingly, this Chapter has developed and confirmed the hypothesis that indigenous protestors that use their shared indigenous language experiences as a unifying factor will improve the effectiveness and success rates of their protests.

In light of the above findings, this Chapter advances our understanding of indigenous protests, which are a common and important facet of politics in Latin America. Despite experiencing varied success of their goals over time, indigenous groups have found that protests are an effective way to garner attention from the state for their causes at the national level. Protests that are motivated by threats to symbolic resources that are meaningful to indigenous communities are more likely to be successful than those that do not. Furthermore, protests that are more heterogenous are more likely to be successful than those that are homogenous. Protests that incorporate language as a main facet of protest mobilization are more likely to be successful than those that do not. This is the synthesis of the two ideas that more heterogeneity equates to more success, and more focus on symbolic resources equates to more success. I argue, and my case studies and statistical models suggest, therefore, that language as a symbolic resource equates to more protest success.

These findings notwithstanding, future work should continue to improve upon the measures and analyses presented here. In my quantitative analysis, I am currently making important assumptions concerning the actual indigenous language composition of the protests that I am analyzing (when interacted with country-year level indigenous language heterogeneity). Future research should work to more directly measure *the social*

composition of protest events in international event datasets so as to more accurately capture the indigenous vs. non-indigenous nature of protests across Latin America. Such improvements could also be incorporated into similar event data measures of government-societal interactions, so as to more directly capture instances of government accommodation vis-à-vis not only protests on the whole, but indigenous and similar group demands more specifically. Likewise, additional case study research into indigenous protest success and failure across additional countries and/or indigenous groups would help to further bolster evidence and understandings of the processes outlined above.

This Chapter's insights underscore the notion that national governments consider and implicitly engage with the politics of language when it comes to indigenous protests. Given the broader systemic effects of indigenous rights protests and government responses to these protests in Latin America, the findings of my investigation suggest an especially powerful effect of languages on the potential for government repression of protests. This Chapter's contribution to understanding the relationship between indigenous language usage in Latin America and government responses to political protests speaks to political science literature on the wide-reaching political protest literature, anthropological literature on indigenous cultures in post-colonial states, and linguistics literature on translation and interpretation. The puzzle presented in this Chapter, the relationship between indigenous language usage as a symbolic resources and government responses to political protests that it uncovers, accordingly interconnects disciplines that work to understand the core question of how humans interact with their broader political environment and vice versa.

This Chapter also serves as a catalyst for new protest research, in which scholars consider language as a vital element to understanding the relationship between state governments and their indigenous populations, both in Latin America and elsewhere. The theoretical framework presented and developed in this Chapter could certainly be extended to other regions, including the United States and beyond. Future research in this same vein could also potentially extend the timescale of my country-month modelling to project into the future. My time-varying data on indigenous language usage collected here can serve as a foundation for further analyses of these sorts, as well as for related research linking indigenous language heterogeneity to other forms of political participation and/or political violence. Furthermore, this Chapter could serve as a springboard to better future quantitative data collection efforts on linguistic and indigenous diversity of specific protest events, and/or protest demands.

A final future extension of this research pertains to explorations of the connection(s) between (i) media rights and related political freedoms and (ii) protest movements in Latin America. Future extensions of this Chapter's current analyses should, for example, consider country-year methods of such rights as additional control variables. This will help to guard against the potential that the drivers of both protest intensity and government accommodation are not suffering from omitted variable bias with respect to country level variation in the affordance of media and related political rights—which past research suggests to be correlated with protest and repression (Perse and Lambe, 2016; Whitte-Woodring and James, 2012; Christensen and Groshek, 2019). In addition, there are two additional aspects of media freedoms and systems that link particularly well with this

Chapter's analysis and could serve to inspire future research. The first is integrating some of the literature on comparative media systems, which would investigate not only the structure and ownership of the particular media system(s) in these countries, but also whether the indigenous populations are given the opportunities to amplify their own voices in a way that is meaningful to their movement. Future research in this vein should consider the implications of media and narrative construction as a contributing factor to indigenous protest movements, as they are related to language. The second application is related to the effects of indigenous protest movements on Media freedom in Latin American societies and indigenous communities in particular. For each of the extensions discussed above, future research could perhaps utilize the annual data collection done by Freedom House to investigate the relationship between indigenous protest movements that center around indigenous language and those groups' abilities to frame their ideals in an unobstructed manner (Freedom House, 2021). In essence, the relationship between media and indigenous protest events is certainly worth exploring.

Chapter 5

CONCLUSION

5.1. Thesis Summary

How have contemporary politics and international relations affected the indigenous communities of Latin America? This dissertation project argues, at its core, that contemporary politics and fluid international relations are fundamentally reshaping Latin America from both inside and out in a decidedly asymmetrical manner. Although many of these changes in the socioeconomic and political spheres are indeed progressive in the aggregate, the evidence presented in this dissertation suggests that the indigenous communities of Latin America may not only be left out of these positive developments but may also in fact experience a number of newfound challenges with profound intense consequences.

To more precisely answer the motivating question above, this dissertation project investigates the contemporary asymmetric power relations between indigenous communities and other politically relevant actors in Latin America. These asymmetric relations are primarily considered in the context of *indigenous languages*, and in relation to how power dynamics influence the rights, representation, and preponderance of speakers of indigenous languages in Latin America—as well as the politics of language more generally. Each of these dynamics are evaluated in relation to both domestic political factors and international political factors. For each of these latter two dimensions, the

primary aim of my dissertation is to identify and explain the contemporary political determinants that *perpetuate* the asymmetry between government and indigenous groups across Latin America. Thus, and building off of the motivating question outlined above, my central research question for this dissertation is: what (domestic and international) mechanisms compel and maintain the asymmetrical cultural power relationship between the indigenous peoples of Latin America and other actors?

My three-article dissertation comprehensively answered this question in three distinct manners. As elaborated upon more below, each of my core substantive Chapters therein tackled unique facets to the above question, in relation to domestic political factors, international political factors, and protest-accommodation dynamics arising out of the consequences of these factors and the power imbalances that they imbue. Together, my Chapters accordingly provide a synthesis, theoretical framework, and analysis of (1) how domestic and international factors contribute to the protection and expansion of indigenous language rights in Latin America and (2) how indigenous social movements can effectively address these dual challenges in contemporary times.

Across the three core substantive Chapters mentioned above, this dissertation project leverages both quantitative and qualitative methods to locate and explain explain the causal drivers of contemporary asymmetries between indigenous language speakers and others. While existing research touches on some of these drivers, none of the extant literature has done so with such comprehensive attention to indigenous languages, specifically, nor has it integrated the domestic *and* international political factors outlined above. Furthermore, what literature is available on these topics tends not to be Latin

American-focused, which is something that this dissertation endeavors to change. This dissertation hence provides a novel understanding of these factors and a deeper contextualization and evaluation of the successes, failures, and broader strategies that Latin American indigenous social movements have seen in trying to address these issues collectively. As a result, this project contributes to the fields of comparative politics and international relations by furthering our understanding of indigenous cultures in Latin America, the erosion of language, and the real-world effects of national and international policy and investment flows on these outcomes. Secondly, this dissertation also offers insights of relevance into a number of related fields and disciplines, including education, sociology, anthropology, and economics by elucidating the roles of factors such as educational investments, protests, and foreign direct investment within the asymmetries outlined earlier. Before elaborating on several of these implications for both policy and academia, I now turn to briefly summarize each of my core substantive Chapter's findings.

Chapter Two (my first substantive Chapter) theoretically posits that indigenous political sovereignty will enhance educational expenditure's positive impacts on indigenous language maintenance in Latin America. By contrast, for countries where indigenous political sovereignty is low or absent, educational expenditure is instead anticipated to undermine indigenous language maintenance in Latin America. These expectations were evaluated via a series of country-year panel count models for the years 1998-2006. Across a wide variety of specifications, I find evidence in support of my contentions that (1) educational expenditures undermine indigenous language maintenance in country-years with low to no indigenous political sovereignty but (2) improve

indigenous language maintenance in country-years with moderate-to-high political sovereignty. My primary analyses and robustness assessments further suggest that these effects are more reliable and sizable for primary educational expenditure than for secondary educational expenditure. I also identify some evidence to suggest that laws or procedures guaranteeing political seats to indigenous representatives and laws or procedures prioritizing indigenous political-administrative divisions are the core drivers of my findings for indigenous political sovereignty in these regards, rather than the provision of more general electoral laws or procedures with direct reference to indigenous voters.

My third Chapter seeks to understand the relationship between foreign direct investment (FDI) and indigenous language usage in Latin America. Through engagement with existing literatures on language and international political economy, as well as several broader literatures on indigenous groups in Latin America, this Chapter develops and confirms the hypothesis that FDI has had a significant and negative effect on indigenous language usage in Latin America since the early 1980s. Accordingly, this Chapter advances existing understandings of FDI flows in the Global South, particularly highlighting the potentially negative effects of an otherwise positively connotated international economic flows and investments. FDI is sought after by national governments in order to improve the lives of their citizens through the accumulation of wealth and reinvestment in activities encompassing domestic education, industry, and research—among others. However, its negative externalities reveal the destruction of culture via indigenous language erosion. This is not to say that FDI has not had some positive aggregate effects in Latin America. Nevertheless, my findings suggest, indigenous

and other marginalized peoples may find it difficult to overcome the barriers that FDI also adds. The core implication of my findings in the latter respect is that an increase in FDI inflows can therefore lead to the creation of new government policy that deprioritizes indigenous language and can therefore have substantial effects on the daily lives of indigenous populations.

My fourth Chapter considers indigenous groups' responses to the negative outcomes identified in Chapters two and three. To do so, it more specifically seeks to evaluate whether indigenous language heterogeneity plays a central role in government response to political protests, and ultimately posits and finds that language is indeed a key symbolic resource in these protests. This Chapter evaluates case-based evidence from Chile, which suggest that increasing heterogeneity in indigenous languages amongst protest movements does also increase government likelihood to concede to demands and decrease the likelihood of repression. The effectiveness of multiple indigenous languages within Latin American protest movements is then further evaluated with an original dataset and a series of country-month difference-in-difference regressions. These regressions ultimately show that my hypothesis about the role of indigenous languages is indeed supported. Accordingly, this Chapter has developed and confirmed the hypothesis that indigenous protestors that use their shared indigenous language experiences as a unifying factor will improve the effectiveness and success rates of their protests.

Overall, my dissertation while has primarily been empirical and not-critical, I endeavor to help provide new evidence that speaks to critical and post-colonial approaches, by engaging with that relevant literature and highlighting the broader importance of taking

post-colonial perspectives seriously when developing empirical studies of political processes in Latin America.

5.2. Academic and Policy Implications

This dissertation project speaks to a variety of structural societal problems such as access to public resources, economic mobility within the state, political representation and government responses to protests. Despite my primary objective of conducting social science research into the drivers and implications of these societal problems, rather than to solve them with any sort of sweeping policy suggestions, there are still extensive policy implications of this research.

In Chapter Two, my results tentatively suggest that the pathways for indigenous language funding as a mechanism for protecting indigenous languages are more effective for investments in primary education rather than secondary education. This reaffirms similar past findings regarding primary (vs. secondary) education for bilingual education (Enrique Lopez in Hornberger, 2008) and suggests that future policy efforts that aim to maintain indigenous languages should focus more so on primary educational resources, expenditure, and delivery than on secondary education. Thus, this Chapter also serves to contribute to existing studies on education and development. More broadly, my interactive findings also reaffirm past scholars' contentions (Enrique Lopez in Hornberger, 2008; Enrique Lopez in Cortina, 2014; Postero and Fabricant, 2019) that effective indigenous language education efforts and policies cannot be pursued in a silo, but rather must actively engage with broader indigenous rights and political sovereignty to ensure success.

Finally, my disaggregated Chapter Two findings for my *indigenous sovereignty rights* index's components intuitively indicate that national laws that more explicitly provide indigenous community members with guaranteed political representation in legislatures or indigenous political-administrative divisions are more effective in ensuring spillovers in indigenous sovereignty rights to other policy areas (such as education) than are more ambiguous references to indigenous rights in electoral or voting rights laws.⁶⁶ The former two areas of codified indigenous rights are less common than the latter, suggesting that much work remains to be done in safeguarding indigenous sovereignty across Latin American countries.

Chapter Three's insights underscore the notion that national governments seeking FDI implicitly engage with the politics of language. Given the broader systemic effects of FDI and MNCs on indigenous rights in Latin America, the findings of this Chapter suggest an especially pernicious effect on the usage and support for indigenous language usage within these countries in particular. This Chapter's contribution to our understanding of the relationship between FDI and indigenous language usage in Latin America speaks to political science literature on comparative political economy, anthropological literature on indigenous cultures in post-colonial states, linguistics literature on translation and interpretation, and sociological literature on education. The puzzle presented and addressed in this Chapter, the relationship between FDI and indigenous language usage that it

⁶⁶ Importantly, these findings are consistent with the broader comparative politics literature that argues that explicit and/or guaranteed representation such as these are much more important and effective than general or ambiguous commitments in a country's legally binding documents (e.g., Constitutions, etc.) (Barten, 2016; Sirakaya et al., 2018).

uncovers, accordingly intersects disciplines that work to understand the core question of how humans interact with their environment and vice versa.

This Chapter also informs several of the core policy implications of this dissertation research. In particular, Chapter Three highlights that the haste in attracting FDI inflows disadvantages non-primary language speakers, suggesting that in countries or contexts with high FDI inflows, governments and advocacy groups should prioritize providing added support (in terms of education, cultural protections, and the like) to non-primary language speakers. This would ensure that the indigenous populations maintain the chance to preserve and sustain their cultural heritage. This also harkens back to Chapter Two, which argues that education policies like intercultural bilingual education (EBI) might offer some protection, but that political sovereignty and autonomy may play an even more important role in the protection of indigenous languages. Chapter Three also speaks to some of the aforementioned broader academic literature, including extant work that is critical of excessive FDI, globalization, and the uneven socioeconomic and political patterns created by these forces (Gastanaga et al., 1998; Kurtishi-Kastrati, 2013). My findings are consistent with this literature.

Chapter Four advances our understanding of indigenous protests, which are a common and important facet of politics in Latin America. Despite experiencing varied success of their goals over time, indigenous groups have found that protests are an effective way to garner attention from the state for their causes at the national level. This Chapter finds that protests motivated by threats to symbolic resources that are meaningful to indigenous communities are more likely to be successful than those that do not (building

off the work of Simmons 2016; Simmons 2016b). Furthermore, as mentioned above, I verify that protests that are more heterogenous are more likely to be successful than those that are homogenous. Likewise, protests that incorporate language as a main facet of protest mobilization are more likely to be successful than those that do not. These findings offer a synthesis of the two ideas that more heterogeneity equates to more success, and more focus on symbolic resources equates to more success. Chapter Four thereby enhances our general insights into extant literature on protest success and government repression (Vogt, 2016; Yashar, 2007; Teo and Loosemore, 2010; Shekha, 2011; Sieder, 2002; Kingstone, Young, and Aubrey, 2013), whilst underscoring the role of indigenous language heterogeneity in protest success as a new variable.

This Chapter's insights emphasize the notion that national governments consider and implicitly engage with the politics of language when it comes to indigenous protests, contributing to the fields of comparative politics, anthropology, and linguistics. Given the broader systemic effects of indigenous rights-focused protest movements and government responses to these protests in Latin America, the findings of my investigation suggest an especially powerful effect of languages on the potential for government repression of protests. This Chapter's contribution to understanding the relationship between indigenous language usage in Latin America and government responses to political protests speaks to political science literature on the wide-reaching political protest literature, anthropological literature on indigenous cultures in post-colonial states, and linguistics literature on translation and interpretation. The puzzle presented in this Chapter, the relationship between indigenous language usage as a symbolic resources and government responses to

political protests that it uncovers, accordingly interconnects disciplines that work to understand the core question of how humans interact with their broader political environment and vice versa. My findings accordingly offer specific and unique insights into indigenous protestors and related advocacy groups, thereby suggesting that their abilities to publicly project coordination among different indigenous groups during protests may raise the chances of protest success. This is seen in my illustrative case of Chile.

5.3. Limitations and Shortcomings

Despite extensive work, this dissertation project does have limitations and shortcomings. In Chapter Two, my current index of *Indigenous Sovereignty Rights* is effectively time invariant and gives equal weight to each of the three components discussed further above (i.e., indigenous voter-tailored electoral laws and/or procedures, local/national laws or procedures that reserve legislative seats for indigenous representatives, and political-administrative divisions that electorally prioritize indigenous groups and peoples). This Chapter would be better served with more nuanced and more time variant data on indigenous political sovereignty. It could also benefit from a more intensive qualitative element to better clarify the specific causal mechanisms underlying my theory and empirical findings. Furthermore, my education expenditure measures, while appropriate for the large-N analysis, omit much of the nuance and variation in indigenous-focused education programs across Latin America. Better quantitative measures of the latter, or (as mentioned), a more detailed qualitative component, would help to better

identify the intricacies of education effectiveness for indigenous language maintenance in Latin America.

My third Chapter outlines many of the shortcomings of *Ethnologue*, and the limits that language data collection can potentially have on my research. While it's demonstrated therein that *Ethnologue* provides the most optimal data for my purposes, future research should endeavor to measure changes in indigenous language usage at more fine-grained scales—both temporally and geographically. I do also acknowledge that my focus on FDI is only one of many facets to the international political-economic pressures that may be threatening indigenous language maintenance in Latin America. Future research should consider the adverse impacts of other key financial flows, including trade or trade agreements (e.g., NAFTA), as well as other forms of political interference by the United States or post-colonial powers in the region. Furthermore, as above, this Chapter could better articulate the causal elements of the relationship between FDI and indigenous language usage via more qualitative case studies.

Based on Chapter Four, future work should continue to improve upon the measures and analyses presented here. In my quantitative analysis in this Chapter, I am currently making important assumptions concerning the actual indigenous language composition of the protests that I am analyzing (when interacted with country-year level indigenous language heterogeneity). Future research should endeavor to measure the *sociolinguistic composition* of protest events more directly in international event datasets so as to more accurately capture the indigenous vs. non-indigenous nature of protests across Latin America. Such improvements could also be incorporated into similar event data measures

of government-societal interactions, so as to more directly capture instances of government accommodation vis-à-vis not only protests on the whole, but indigenous and similar group demands more specifically. Likewise, additional case study research into indigenous protest success and failure across additional countries and/or indigenous groups would help to further bolster evidence and understandings of the processes outlined above.

5.4 Looking Forward: Future Research

This dissertation will hopefully serve to inspire future research in the fields of Latin American politics, the politics of language, indigenous rights in Latin America, and related fields.

Future extensions of Chapter Two should endeavor to both measure and interrogate educational expenditure and its potentially negative effects on indigenous languages at more fine-grained, time varying levels. One could also consider allowing their respective contributions to *Indigenous Sovereignty Rights* to vary according to alternative (theoretically informed) weighting schemes. Even beyond the purposes of my analysis in this dissertation, my conceptualization of indigenous sovereignty rights, and its various components, is relatively crude. This suggests that a broader research agenda may entail understanding and conceptualizing these rights at more nuanced levels, not only with respect to distinct rights, but also how these rights may distinctly function across different political systems. The latter characteristics could include the contexts of democratic backsliding, at both the national and local levels of governance.

Likewise, future research should also expand the timeframe analyzed above, especially in the interest of better modeling the temporal lag by which *Indigenous Sovereignty Rights* and *Educational Expenditure* may each affect and/or reinforce indigenous language education. At present the country-year results presented above may be overstating (understating) the immediacy (compounding nature) of this effect. Further quantitative and qualitative analyses could also help to assess this. In the future, this is a next anticipated step in this research agenda. Furthermore, interviews and/or survey data may also help complement our understandings of the interactive effects of education (expenditure) and indigenous political sovereignty on indigenous language maintenance in Latin America. Although I established convincing macro-level evidence for these trends, more micro-level evidence is needed for a fuller understanding of the problems at hand. Through the use of interviews and/or surveys, I would be able to better capture the decision calculus that *individual* indigenous community members make with regards to when they choose to pressure the government about educational programs and educational delivery versus when they do not (as it relates to their perceived levels of political sovereignty and representation).

My third Chapter aims to inspire future research not just on the relationship between Latin America, FDI, and indigenous language usage, but on the greater problems of asymmetry that persist between indigenous peoples and their governments in Latin America and around the world. The theoretical framework of this Chapter demonstrates the potential for future applications in other regions, at least in part. Future research should evaluate these findings for FDI inflows not only for the Latin American region, but also

globally, and potentially over even longer time periods. Likewise, subsequent research could also extend this Chapter's current insights to evaluate how other transnational economic and/or political flows may similarly undermine the maintenance of indigenous language usage throughout Latin America and elsewhere. The time varying data on indigenous language usage collected here can serve as a foundation for such analyses and could be extended into the future based upon more recent releases of *Ethnologue's* original source information. Finally, this Chapter's analysis and conclusions could also benefit from other methodological approaches to the study of the above phenomena, including survey-based research into indigenous speakers in Latin America, such as that provided by The AmericasBarometer by the Latin American Public Opinion Project (LAPOP).

Chapter Four could serve as a catalyst for new protest research, in which scholars consider language as a vital element to understanding the relationship between state governments and their indigenous populations, both in Latin America and elsewhere. The theoretical framework presented and developed in this Chapter could certainly be extended to other regions, including the United States and beyond. Future research in this same vein could also potentially extend the timescale of my country-month modelling to project into the future. My time-varying data on indigenous language usage collected here can serve as a foundation for further analyses of these sorts, as well as for related research linking indigenous language heterogeneity to other forms of political participation and/or political violence. Furthermore, this Chapter could serve as a springboard to better future quantitative data collection efforts on linguistic and indigenous diversity of specific protest events, and/or protest demands.

A future extension of this dissertation pertains to explorations of the connection(s) between (i) media rights and related political freedoms and (ii) protest movements in Latin America. Future extensions of my dissertation analysis should, for example, consider country-year methods of such rights as additional control variables. This will help to guard against the potential that the drivers of both protest intensity and government accommodation are not suffering from omitted variable bias with respect to country level variation in the affordance of media and related political rights—which past research suggests to be correlated with protest and repression (Perse and Lambe, 2016; Whitte-Woodring and James, 2012; Christensen and Groshek, 2019). In addition, future research would be wise to integrate some of the literature on comparative media systems, which would investigate not only the structure and ownership of the particular media system(s) in these countries, but also whether the indigenous populations are given the opportunities to amplify their own voices in a way that is meaningful to their movement. Future research in this vein should also consider the implications of media and narrative construction as a contributing factor to indigenous protest movements, as they are related to language. Furthermore, future research should integrate an analysis of the effects of indigenous protest movements on media freedom in Latin American societies and indigenous communities in particular. For each of the extensions discussed above, future research could perhaps utilize the annual data collection done by Freedom House to investigate the relationship between indigenous protest movements that center around indigenous language and those groups' abilities to frame their ideals in an unobstructed manner (Freedom House, 2021).

No matter which directions this research goes in next, the findings presented thus far have provided convincing answers to the core questions posited in this dissertation. Namely, while a number of macro-political trends are serving to benefit Latin America in the aggregate, these same processes often exert profound negative consequences upon Latin America's indigenous populations. These consequences build upon longstanding power asymmetries, but incorporate more recent political processes and actors, such as FDI inflows and MNCs, new forms of political sovereignty, and shifts in education policy. The theoretical arguments and empirical findings presented above have shed light on these dynamics. It is accordingly hoped that this dissertation will consequently serve as an important step towards more comprehensive engagement with the politics of indigenous language (protection and representation) within the discipline of political science, and its various subfields.

BIBLIOGRAPHY

- Agenor, P.R. and Neanidis, K. C., 2011. "The Allocation of Public Expenditure and Economic Growth." *The Manchester School*. 79(4), pp. 899-931.
- Alberti, C., 2015. Consolidating Power in Multiethnic Societies: The MAS and the ambivalence of collective mobilization in Bolivia. *Development*, 58(1), pp. 65-71.
- Alesina, A. et al., 2003. Fractionalization. *Journal of Economic Growth*, 8, pp. 155–194.
- Altieri, M.A. and Nicholls, C.I., 2008. Scaling up Agroecological Approaches for Food Sovereignty in Latin America. *Development*, 51(4), pp. 472–480.
- Amin, S., 1976. *Unequal Development: An Essay on the Social Formations of Peripheral Capitalism*. Sussex: The Harvester Press (John Spiers).
- Anon., 1964. Soviet Atlas Narodov Mira Dataset.
- Anon., 2012. No Headline in Original. *Marketwire Spanish (Canada)*. Published piece found via NexisUni. First line "Países como Brasil, Italia, Japón, México, Rusia y Turquía se encuentran en desventaja"
- Anon., 2018. About SIL International. *SIL International*. Available at:
<https://www.sil.org/about>
- Anon., 2019. The Polity IV Project. Published by the Center for Systemic Peace.
- Anon., 2020. Chile indigenous: Time to make our voices heard. *BBC News*.
- Anon., Ethnologue: Languages of the World. *Ethnologue*. Available at:
<https://www.ethnologue.com/about> [Accessed May 4, 2019].
- Anon., 2012. Chile: The Repression of the Mapuche in Araucania Continues. *Indigenous Peoples Issues and Resources*.

- Anon., 2018. About SIL International. *SIL International*. Available at: <https://www.sil.org/about> [Accessed May 4, 2019].
- Anon., 2018. About SIL International. *SIL International*. Available at: <https://www.sil.org/about> [Accessed May 4, 2019].
- Apfeld, B. and Liu, A., 2021. Education prioritization and language spread. *The Social Science Journal*, pp. 1-17.
- Arnove, R., Franz, S. and Alberto Torres, C., 2013. Education in Latin America: From Dependency and Neoliberalism to Alternative Paths to Development. In R. F. Arnove, C. Alberto Torres, & S. Franz, eds. *Comparative Education: The Dialectic of the Global and the Local*. Lanham, MD: Rowman and Littlefield, pp. 292–314.
- Ashcroft, B., Griffiths, G. and Tiffin, H., 2013. *Postcolonial Studies: The Key Concepts*. 3rd ed. Abingdon: Routledge.
- Astor, M., 2021. The last living man of the Juma people in Brazil has died from Covid-19. *The New York Times*, [online] Available at: <<https://www.nytimes.com/2021/03/14/world/the-last-living-man-of-the-juma-people-in-brazil-has-died-from-covid-19.html>>.
- Atkin, C., 2003. Rural Communities: Human and symbolic capital development, fields apart. *Compare: A Journal of Comparative and International Education*, 33(4), pp. 507–518.
- Aytaç, S.E., Schiumerini, L. and Stokes, S., 2017. Protests and Repression in New Democracies. *Perspectives on Politics*, 15(1), pp. 62–82.

- Back, M., and Zavala, V., 2018. *Racialization and Language: Interdisciplinary Perspectives From Perú*. Taylor & Francis.
- Bagozzi, B.E., Berliner, D. and Welch, R.M., 2021. The Diversity of Repression: Measuring State Repressive Repertoires with Events Data. *Journal of Peace Research*, 50(3), pp. 220–226.
- Barten, U., 2016. The EU's Lack of Commitment to Minority Protection. *Journal on Ethnopolitics and Minority Issues in Europe*, 15(2).
- Bates, R., Coatsworth, J., and Williamson, J., 2007. Lost Decades: Postindependence Performance in Latin America and Africa. *The Journal of Economic History*, 67(4), pp. 917-943. Retrieved June 23, 2021, from <http://www.jstor.org/stable/40056404>
- Beieler, J., Brandt, P.T., Halterman, A., Schrodt, P.A., and Simpson, E. M., 2016. *Computational Social Science: Discovery and Prediction*. New York: New York: Cambridge University Press: *Generating Political Event Data in Near Real Time: Opportunities and Challenges*.
- Bellemare, M. F., Masaki, T., and Pepinsky, T. B., 2017. Lagged Explanatory Variables and the Estimation of Causal Effect. *The Journal of Politics*, 79(3), pp. 949–963. <https://doi.org/10.1086/690946>
- Biglaiser, G., and DeRouen, K., 2006. Economic Reforms and Inflows of Foreign Direct Investment in Latin America. *Latin American Research Review*, 41(1), pp. 51-75. Retrieved June 23, 2021, from <http://www.jstor.org/stable/3662784>
- Birnie, J.K., 2004. Stabilizing Party Systems and Excluding Segments of Society?: The

- Effects of Formation Costs on New Party Foundation in Latin America. *Studies in Comparative International Development*, 39(3), pp. 3–27.
- Blair, L., 2019. Conquistadors tumble as indigenous Chileans tear down statues. *The Guardian*.
- Boccard, G., 2002. The Mapuche People in Post-Dictatorship Chile. *Études rurales*, (163-164), pp. 283-303.
- Bomberg, E. and McEwen, N., 2012. Mobilizing Community Energy. *Energy Policy*, 51.
- Boschee, E., Lautenschlager, J., O'Brien, S., Steve, S., James, and Ward, M., 2015, "ICEWS Coded Event Data", <https://doi.org/10.7910/DVN/28075>, Harvard Dataverse, V30.
- Brambor, T., Roberts Clark, W., and Golder, M., 2006. Understanding Interaction Models: Improving Empirical Analyses. *Political Analysis*, 14, pp. 63-82.
- Bremmer, I., 2019. What Happens Next in the Chile Protests. *Time*.
- Brockett, C., 1991. The Structure of Political Opportunities and Peasant Mobilization in Central America. *Comparative Politics*, 23(3), pp. 253-274.
- Cárdenas Neira C, Cabalin, C. and Montero, L., 2017. Análisis crítico de editoriales y su influencia en la conformación de políticas sobre la calidad de la educación en Chile: Los casos de La Tercera y El Mercurio. *Estudios Pedagógicos*, 43(1), pp. 19–39.
- Carey, S., 2006. The Dynamic Relationship Between Protest and Repression. *Political Research Quarterly*, 59(1), pp. 1-11.
- Carraher-Kang, A., 2019. Indigenous Peoples Lead the Resistance Movement in Chile.

Cultural Survival.

- Carrión, J., 2021. *A Dynamic Theory of Populism in Power: The Andes in Comparative Perspective.* Oxford University Press.
- Carruthers, D. and Rodriguez, P., 2009. Mapuche Protest, Environmental Conflict and Social Movement Linkage in Chile. *Third World Quarterly*, 30(4), pp. 743-760.
- Carter, D., 2010. Chile's Other History: Allende, Pinochet, And Redemocratisation in Mapuche Perspective. *Studies in Ethnicity and Nationalism*, 10(1), pp. 59–75.
- Ceddia, M.G., Gunter, U. and Paziienza, P., 2019. Indigenous peoples' land rights and agricultural expansion in Latin America: A dynamic panel data approach. *Forest Policy and Economics*, 109, pp. 1-8.
- Cerny, P. G., 2010. The competition state today: from raison d'État to raison du Monde. *Policy Studies*, 31(1), pp. 5–21.
<https://doi.org/10.1080/01442870903052801>
- Chiswick, B., Patrinos, H. and Hurst, M., 2000. Indigenous Language Skills and the Labor Market in a Developing Economy: Bolivia. *Economic Development and Cultural Change*, 48(2), pp. 349-367.
- Christensen, B. and Groshek, J., 2019. Emerging media, political protests, and government repression in autocracies and democracies from 1995 to 2012. *International Communication Gazette*, 82(8), pp. 685–704.
- Cleary, M., 2000. Democracy and Indigenous Rebellion in Latin America. *Comparative Political Studies*, 33(9), pp. 1123-1153.
- Colombia's Constitution of 1991 with Amendments through 2015, 1991.

- Coppedge, M., et al., 2021. "V-Dem Dataset v11.1," Varieties of Democracy Project. <https://doi.org/10.23696/vdemds21>
- Coulmas, F., 2005. *Sociolinguistics: The Study of Speakers' Choices*. Cambridge University Press.
- Cronquist, K., and Fiszbein, A., 2017. *English Language Learning in Latin America*. The Dialogue: Leadership for the Americas. <https://www.thedialogue.org/wp-content/uploads/2017/09/English-Language-Learning-in-Latin-America-Final-1.pdf>
- Davis, D. E., 1999. The Power of Distance: Re-Theorizing Social Movements in Latin America. *Theory and Society*, 28(4), pp. 585–638.
- de la Torre, C., 2013. In the Name of the People: Democratization, Popular Organizations, and Populism in Venezuela, Bolivia, and Ecuador. *European Review of Latin American and Caribbean Studies / Revista Europea de Estudios Latinoamericanos y del Caribe*, 95, pp. 27-48.
- del Valle, S., 2014. Piden voluntad política para fomentar inglés; Debe enseñarse como segunda lengua, estima Education First. Empeora México en aprendizaje del idioma respecto a AL. *Reforma (Mexico)*.
- Diaz Fouces, O., 2005. Translation policy for minority languages in the European Union. *Less Translated Languages (Benjamins Translation Library)*, pp. 95–104.
- Donaubauer, J., Neumayer, E., and Nunnenkamp, P., 2019. Financial market

development in host and source countries and their effects on bilateral foreign direct investment. *The World Economy*, 43(3), pp. 534–556.

<https://doi.org/10.1111/twec.12884>

Duchene, A., Heller, M., and Milani, T. M., 2008. *Discourses of Endangerment: Ideology and Interest in the Defence of Languages*. Bloomsbury Academic.

Easterly, W. and Levine, R., 1997. Africa's Growth Tragedy: Policies and Ethnic Divisions. *The Quarterly Journal of Economics*, 112(4), pp. 1203-1250.

Eckstein, S. and Garretón Merino, M., 2004. *Power and Popular Protest: Latin American Social Movements*. Berkeley, California: University of California Press.

Ellington, S.A.V., 2021. Moribund: exploring the relationship between foreign direct investment and indigenous language erosion in Latin America. *Review of International Political Economy*.

Enrique López, L., 2008. Top-down and Bottom-up: Counterpoised Visions of Bilingual Intercultural Education in Latin America. In: N. Hornberger, ed., *Can Schools Save Indigenous Languages?: Policy and Practice on Four Continents*, 1st ed. New York: Palgrave MacMillan, pp. 42-66.

Enrique López, L., 2014. Indigenous Intercultural Bilingual Education in Latin America: Widening Gaps between Policy and Practice. In: R. Cortina, ed., *The Education of Indigenous Citizens in Latin America*, 1st ed. Bristol: Multilingual Matters, pp. 19-49.

Escobar, A., 2018. *The Making of Social Movements in Latin America: Identity, Strategy, And Democracy*. 2nd ed. Taylor & Francis.

- Fanon, F., 1968. *The Wretched of The Earth*. New York: Grove Press.
- Fearon, J., 1999. What is identity (as we now use the word). *Unpublished manuscript*, Stanford University.
- Fisher, W., 1994. Megadevelopment, environmentalism, and Resistance: The institutional context of Kayapó Indigenous politics in Central Brazil. *Human Organization*, 53(3), pp. 220–232.
- Fredriksson, R., Barner-Rasmussen, W., and Piekkari, R., 2006. The multinational corporation as a multilingual organization. *Corporate Communications: An International Journal*, 11(4), pp. 406–423.
<https://doi.org/10.1108/13563280610713879>
- Freedom House, 2021. Available at: <https://freedomhouse.org/reports/publication-archives> [Accessed 2022].
- Fuentes, A., and Pipkin, S., 2015. Self-discovery in the dark: the demand side of industrial policy in Latin America. *Review of International Political Economy*, 23(1), pp. 153–183. <https://doi.org/10.1080/09692290.2015.1104374>
- Funk, K., 2012. “Today There Are No Indigenous People” in Chile?: Connecting the Mapuche Struggle to Anti-Neoliberal Mobilizations in South America. *Journal of Politics in Latin America*, 4(2), pp. 125–140.
- Gal, S., 1989. Language And Political Economy. *Annual Review of Anthropology*, 18(1), pp. 345-367.
- García, M. E., 2003. The Politics of Community: Education, Indigenous Rights, and

- Ethnic Mobilization in Peru. *Latin American Perspectives*, 30(1), pp. 70–95.
<https://doi.org/10.1177/0094582x02239145>
- Gastanaga V.M., Nugent J.B., and Pashamova B., 1998. Host country reforms and FDI inflows: How much difference do they make? *World Development*, 26(7), pp. 1299–1314.
- Gillion, D. Q., 2012. Protest and congressional behavior: assessing racial and ethnic minority protests in the district. *The Journal of Politics*, 74(4), pp. 950-962.
- Goldstein, J. S. and Freeman, J.R., 1990. *Three Way Street: Strategic Reciprocity in World Politics*. Chicago, IL: University of Chicago Press.
- Goldstein, J., 1992. A Conflict-Cooperation Scale for WEIS Events Data. *Journal of Conflict Resolution*, 36(2), pp. 369-385.
- Gordon, T., and Webber, J. R., 2008. Imperialism and Resistance: Canadian mining companies in Latin America. *Third World Quarterly*, 29(1), pp. 63–87.
<https://doi.org/10.1080/01436590701726509>
- Graham, L., 2004. How Should an Indian Speak?: Amazonian Indians and the Symbolic Politics of Language in the Global Public Sphere. In: K. Warren and J. Jackson, ed., *Indigenous Movements, Self-Representation, and the State in Latin America*, 2nd ed. Austin: The University of Texas Press, pp. 181-228.
- Graziano Ceddia, M., Gunter, U. and Paziienza, P., 2019. Indigenous peoples' land rights and agricultural expansion in Latin America: A dynamic panel data approach. *Forest Policy and Economics*, 109.
- Graziano Ceddia, M., Gunter, U. and Corriveau-Bourque, A., 2015. Land tenure and

- agricultural expansion in Latin America: The role of Indigenous Peoples' and local communities' forest rights. *Global Environmental Change*, 35, pp. 316-322.
- Grey Postero, N. and Zamosc, L., 2006. *The Struggle for Indigenous Rights in Latin America*. 2nd ed. Brighton [England]: Sussex Academic Press.
- Grisaffi, T., 2019. *Coca Yes, Cocaine No: How Bolivia's Coca Growers Re-Shaped Democracy*, Durham, NC: Duke University Press.
- Grugel, J. and Riggirozzi, P., 2012. Post-neoliberalism in Latin America: Rebuilding and Reclaiming the State after Crisis. *Development and Change*, 43(1), pp. 1-21.
- Habound, M. et al., 2016. Linguistic Human Rights and Language Revitalisation: Latin America and the Caribbean. In T. L. McCarty (Ed.), *The Handbook of Indigenous Language Revitalization in the Americas*. Routledge.
- Hale, G. and Xu, M., 2016. "FDI Effects on the Labor Market of Host Countries," Federal Reserve Bank of San Francisco Working Paper 2016-25.
- Hanna, P., Langdon, E. and Vanclay, F., 2016. Indigenous rights, performativity and protest. *Land Use Policy*, 50, pp. 490-506.
- Hardt, M. and Negri, A., 2000. *Empire*. 1st ed. Cambridge: Harvard University Press.
- Hart, J., 1976. Three Approaches to the Measurement of Power in International Relations. *International Organization*, 30(2), pp. 289-305.
- Hendrickson, D., 1994. The Democratist Crusade: Intervention, Economic Sanctions, and Engagement. *World Policy Journal*, [online] 11(4), pp.18-30. Available at: <http://www.jstor.org/stable/40209381>
- Henze, R., and Davis, K. A., 1999. Authenticity and Identity: Lessons from Indigenous

- Language Education. *Anthropology & Education Quarterly*, 30(1), pp. 3–21.
<https://doi.org/10.1525/aeq.1999.30.1.3>
- Hornberger, N. and King, K., 1996. Language Revitalisation in the Andes: Can the Schools Reverse Language Shift?. *Journal of Multilingual and Multicultural Development*, 17(6), pp. 427-441.
- Hornberger, N., 1998. Language Policy, Language Education, Language Rights: Indigenous, Immigrant, and International Perspectives. *Language in Society*, 27(4), pp. 439-458.
- Hornberger, N., 2006. Voice and Bilingualism in Indigenous Language Revitalization: Contentious Educational Practices in Quechua, Guarani, and Māori Contexts. *Journal of Language, Identity & Education*, 5(4), pp. 277-292.
- Howard, R., Ricoy, R. D. P., and Ciudad, L. A., 2018. Translation policy and indigenous languages in Hispanic Latin America. *International Journal of the Sociology of Language*, (251), pp. 19–36. <https://doi.org/10.1515/ijsl-2018-0002>
- Hughes, N., 2010. Indigenous Protest in Peru: The ‘Orchard Dog’ Bites Back. *Social Movement Studies*, 9(1), pp. 85-90.
- ICEF Monitor, 2016. *Peru commits to bilingualism with a new focus on English*.
<https://monitor.icef.com/2016/01/peru-commits-to-bilingualism-with-a-new-focus-on-english/>.
- IDB, 2010. “IDB Indigenous Legislation DataBank: Base de datos de Legislación Indígena.” Inter-American Development Bank. www.iadb.org in Latin America. Cambridge: Cambridge University Press.

- International Bank for Reconstruction and Development, 2015. *Indigenous Latin America in the 21st Century*. The World Bank.
<https://openknowledge.worldbank.org/handle/10986/23751>
- Jackson, J.E. and Warren, K.B., 2005. Indigenous Movements in Latin America, 1992-2004: Controversies, Ironies, New Directions. *Annual Review of Anthropology*, 34(1), pp. 549–573.
- Jarroud, M., 2012. Chile Rights: Children Injured in Police Crackdown on Mapuche Indians. *Inter Press Service/Global Information Network*.
- Johnson, A., 2006. The Effects of FDI Inflows on Host Country Economic Growth. *The Royal Institute of Technology Centre of Excellence for Studies in Science and Innovation*, Paper 58.
- José Quiroga, M., 2017. Colores Unidos de Persecución: La lucha de las comunidades nativas de la Patagonia contra Benetton. *Global Voices Online*.
- Kaplan, S., 2016. Banking unconditionally: the political economy of Chinese finance in Latin America. *Review of International Political Economy*, 23(4), pp. 643-676.
- Kickham, E., 2015. *Purism, Prescriptivism, and Privilege: Choctaw Language Ideologies and their Impact on Teaching and Learning*. PhD. The University of Oklahoma.
- Kim, M., et al., 2015. Lingua Mercatoria: Language and Foreign Direct Investment. *International Studies Quarterly*, 59(2), pp. 330–343.
- King, G., 1989. “Event Count Models for International Relations: Generalizations and Applications” *International Studies Quarterly*, (33), pp. 123-147.
- Kingstone, P., Young, J.K. and Aubrey, R., 2013. Resistance to Privatization: Why

- protest movements succeed and fail in Latin America. *Latin American Politics and Society*, 55(03), pp. 93–116.
- Kitschelt, H.P., 1986. Political opportunity structures and Political Protest: Anti-nuclear movements in four democracies. *British Journal of Political Science*, 16(1), pp. 57–85.
- Konara, P., and Wei, Y., 2014. The Role of Language in Bilateral FDI: A Forgotten Factor? *International Business and Institutions after the Financial Crisis*, pp. 212–227. https://doi.org/10.1057/9781137367204_13
- Kronik, J. and Verner, D., 2010. *Indigenous Peoples and Climate Change in Latin America And the Caribbean*. Directions in Development; environment and sustainable development. [online] The World Bank. Available at: <<http://hdl.handle.net/10986/2472>>.
- Kurtishi-Kastrati, S., 2013. The Effects of Foreign Direct Investments for Host Country's Economy. *European Journal of Interdisciplinary Studies*, 5(1).
- La Porta, R., 1999. *La Porta Quality of Government Dataset* [Dataset]. Compiled from La Porta et al. results (1999) – see below.
- La Porta, R. et al., 1999. The Quality of Governance. *The Journal of Law, Economics, & Organization*, 15(1), pp. 222–279.
- Langer, E. and Muñoz, E., 2003. *Contemporary Indigenous Movements in Latin America*. Wilmington, DE: Scholarly Resources.
- Lehoucq, F., 2020. Bolivia's Citizen Revolt, *Journal of Democracy*, (31), pp. 130-144.
- Levinsohn, J., 2004. Globalization and the Returns to Speaking English in South

Africa. *NBER Working Papers on Globalization & Poverty*.

Lipset, S. M., 1959. "Some Social Requisites of Democracy: Economic Development and

Political Legitimacy." *American Political Science Review*, (53), pp. 69–105.

Liu, A. H., 2011. Linguistic Effects of Political Institutions. *The Journal of*

Politics, 73(1), pp. 125–139. <https://doi.org/10.1017/s0022381610000915>

Liu, A. H., 2016. Democracy and minority language recognition: tyranny of the majority

and the conditional effects of group size. *Democratization*, pp. 1–22.

<https://doi.org/10.1080/13510347.2016.1245292>

Liu, A. H., and Pizzi, E., 2016. The Language of Economic Growth: A New Measure of

Linguistic Heterogeneity. *British Journal of Political Science*, 48(4), pp. 953–980.

<https://doi.org/10.1017/s0007123416000260>

Liu, A. H., Gandhi, J., and Bell, C., 2016. Minority Languages in Dictatorships: A New

Measure of Group Recognition. *Political Science Research and Methods*, 6(4),

pp. 639–660. <https://doi.org/10.1017/psrm.2016.1>

Liu, A., 2015. *Standardizing diversity: The Political Economy of Language Regimes*. 1st

ed. Philadelphia: The University of Pennsylvania Press.

Liu, A., 2017. Democracy and minority language recognition: tyranny of the majority and

the conditional effects of group size. *Democratization*, 24(3), pp. 544–565.

Loofbourow, L., 2019. Chile's People Have Had Enough. *Slate*.

Maciel Reis, B., Gross Furini, L. and Mara Henriques, S., 2017. Protests in Brazil:

Mobile Networks and devices as tools of protest. *Brazil (Studies in Media and*

Communications), (13), pp. 215–229.

- Mannheim, B., 2011. *The Language of The Inka Since the European Invasion*. Austin: University of Texas Press.
- Mansbridge, J., 1999. Should blacks represent blacks and women represent women? A contingent 'yes'. *The Journal of Politics*, 61(3), pp. 628-657.
- Marshall, M. G., Jaggers, K., and Gurr, T. R., 2018. Polity IV Project, Political Regime Characteristics and Transitions, 1800-2017. Center for Systemic Peace.
- Martín Cervantes, P. A., Rueda López, N., and Cruz Rambaud, S., 2020. The Effect of Globalization on Economic Development Indicators: An Inter-Regional Approach. *Sustainability*, 12(5), pp. 1–18. <https://doi.org/10.3390/su12051942>
- Matear, A., 2008. English language learning and education policy in Chile: Can English really open doors for all? *Asia Pacific Journal of Education*, 28(2), pp. 131–147.
- McCarty, T. and Nicholas, S., 2014. Reclaiming Indigenous Languages. *Review of Research in Education*, 38(1), pp. 106-136.
- McCarty, T.L., 2003. Revitalising Indigenous Languages in Homogenising Times. *Comparative Education*, 39(2), pp. 147–163.
- McGowan, C., 2021. Indigenous people find voice in Chile's constitution rewrite; Nearly 13% of Chileans identify as Indigenous, but they aren't noted in Chile's Constitution. Now, they have a seat at the table drafting a new one. *The Christian Science Monitor*.
- McKay, B., Nehring, R. and Walsh-Dilley, M., 2014. The 'state' of food sovereignty in Latin America: Political projects and alternative pathways in Venezuela, Ecuador and Bolivia. *The Journal of Peasant Studies*, 41(6), pp. 1175–1200.

- Medeiros, C., 2001. Civilizing the Popular?. *Critique of Anthropology*, 21(4), pp. 401-425.
- Miller, L., 2021. Making history: Chileans start work on first constitution equally drafted by women, men. *NBC News Online*.
- Minority Rights Group International. (2007). *World Directory of Minorities and Indigenous Peoples – Uruguay*. <https://www.refworld.org/docid/4954ce5723.html>
- Mische, A., 2008. *Partisan publics: Communication and contention across Brazilian youth activist networks*, Princeton, NJ: Princeton University Press.
- Monroe, K., Hankin, J. and Vechten, R., 2000. The Psychological Foundations of Identity Politics. *Annual Review of Political Science*, 3(1), pp. 419-447.
- Moore, W., 1998. Repression and Dissent: Substitution, Context, and Timing. *American Journal of Political Science*, 42(3), pp. 851- 873.
- Mora, R. A., Chiquito, T., and Zapata, J. D., 2019. Bilingual Education Policies in Colombia: Seeking Relevant and Sustainable Frameworks for Meaningful Minority Inclusion. In B. Johannessen (Ed.), *Bilingualism and Bilingual Education: Politics, Policies and Practices in a Globalized Society*. Springer.
- Mosley, L., and Uno, S., 2007. Racing to the Bottom or Climbing to the Top? Economic Globalization and Collective Labor Rights. *Comparative Political Studies*, 40(8), pp. 923–948. <https://doi.org/10.1177/0010414006293442>
- Mufwene, S., 2008. *Language Evolution: Contact, Competition and Change*. Continuum. Natural Resources Defense Council (NRDC). [online] State News Service. Available at: <https://advance-lexis->

com.udel.idm.oclc.org/api/document?collection=news&id=urn:contentItem:5P6
W-2041-DYTH-G41H-00000-00&context=1516831.

Noble Wilford, J., 2007. World's Languages Dying Off Rapidly. *The New York Times*.

Available at: <https://www.nytimes.com/2007/09/18/world/18cnd-language.html>.

O'Donnell, G., 1986. On the Fruitful Convergences of Hirschman's Exit, Voice, and

Loyalty, and Shifting Involvements. Reflections from the Recent Argentine

Experience. *Development, Democracy, and the Art of Trespassing: Essays in*

Honor of Albert O. Hirschman. Foxley, A., McPherson, M., O'Donnell, G., &

Hirschman, A., eds. Notre Dame, IN: University of Notre Dame Press.

Omi, M. and Winant, H., 2014. *Racial Formation in The United States*. 3rd ed.

Routledge. Organización Nacional Indígena de Colombia. (2019). *ONIC - Awá*.

[online] Available at: <https://www.onic.org.co/pueblos/112-awa>

Otto, B. and Böhm, S., 2006. "The people" and resistance against international business:

The case of the Bolivian "water war." *Critical Perspectives on International*

Business, 2(4), pp. 299–320.

Perrault, T., 2008. Custom and Contradiction: Rural Water Governance and the Politics

of *Usos y Costumbres in Bolivia's Irrigators' Movement*. *Annals of the*

Association of American Geographers, 98(4), pp. 834–854.

Perreault, T. and Green, B., 2013. Reworking the Spaces of Indigeneity: The Bolivian

Ayllu and Lowland Autonomy Movements Compared. *Environment and*

Planning D: Society and Space, 31(1), pp. 43–60.

Perreault, T., 2006. From the *Guerra Del Agua* to the *Guerra Del Gas*: Resource

- Governance, Neoliberalism and Popular Protest in Bolivia. *Antipode*, 38(1), pp. 150–172.
- Perse, E.M. and Lambe, J.L., 2017. *Media Effects and Society*, New York, NY: Routledge.
- Pfaff, S., and Yang, G., 2001. Double-Edged Rituals and the Symbolic Resources of Collective Action: Political Commemorations and the Mobilization of Protest in 1989. *Theory and Society*, 30(4), pp. 539–589.
- Piazza, A. and Wang, D.J., 2020. Claim specialization, Tactical diversity and the role of the Protest environment in the success of U.S. Antinuclear Activism. *Mobilization: An International Quarterly*, 25(1).
- Pierskalla, J., 2009. Protest, Deterrence, and Escalation: The Strategic Calculus of Government Repression. *The Journal of Conflict Resolution*, 54(1), pp. 117–145.
- Pinto, P. M., and Zhu, B., 2016. Fortune or Evil? The Effect of Inward Foreign Direct Investment on Corruption. *International Studies Quarterly*, 60(4), pp. 693–705. <https://doi.org/10.1093/isq/sqw025>
- Posey, D., 2000. Exploitation of Biodiversity and Indigenous Knowledge in Latin America: Challenges to Sovereignty and the Old Order. In C. de Vasconcelos Cavalcanti, ed. *The Environment, Sustainable Development, and Public Policies: Building Sustainability in Brazil*. Northampton, MA: Edward Elgar.
- Postero, N. and Fabricant, N., 2019. Indigenous sovereignty and the new developmentalism in plurinational Bolivia. *Anthropological Theory*, 19(1), pp. 95–119.

- Postero, N., 2005. Indigenous Responses to Neoliberalism: A Look at the Bolivian Uprising of 2003. *PoLAR: Political and Legal Anthropology Review*, 28(1), pp. 73-92.
- Puelma, F., 2021. Rebellion in Chile: Why Does it Take a Match to Win? *CE Noticias Financieras*.
- Raftopoulos, M. and Morley, J., 2020. Ecocide in the Amazon: The Contested politics of environmental rights in Brazil. *The International Journal of Human Rights*, 24(10), pp. 1616–1641.
- Reuveny, R. and Kang, H., 1996. International trade, political conflict/cooperation, and Granger causality. *American Journal of Political Science*, 40(3), pp. 943–970.
- Rice, R., 2012. *The New Politics of Protest: Indigenous Mobilization in Latin America's Neoliberal Era*. Tucson: University of Arizona Press.
- Rich, J.A., 2020. Organizing Twenty-First-Century Activism: From Structure to Strategy In Latin American Social Movements. *Latin American Research Review*, 55(3), pp. 430–444.
- Richards, P., 2010. Of Indians and terrorists: How the state and local elites construct the Mapuche in neoliberal multicultural Chile. *Journal of Latin American Studies*, 42(1), pp. 59–90.
- Rodríguez, P. and Carruthers, D., 2008. Testing Democracy's Promise: Indigenous

- mobilization and the Chilean state. *European Review of Latin American and Caribbean Studies / Revista Europea de Estudios Latinoamericanos y del Caribe*, (85).
- Rubin, J., 1962. Bilingualism in Paraguay. *Anthropological Linguistics*, 4(1), pp. 52-58.
Retrieved June 23, 2021, from <http://www.jstor.org/stable/30022345>
- Sadowsky, S. et al., 2013. Mapudungun. *Journal of the International Phonetic Association: Illustrations of the IPA*, 43(1), pp. 87–96.
- Safran, W. and Liu, A., 2012. Nation-Building, Collective Identity, and Language Choices: Between Instrumental and Value Rationalities. *Nationalism and Ethnic Politics*, 18(3), pp. 269-292.
- Said, E., 1978. *Orientalism*. New York: Vintage Books.
- Salvatore, R.D., 1993. Market-oriented reforms and the language of popular protest: Latin America from Charles III to the IMF. *Social Science History*, 17(4), pp. 485–523.
- Schneider, B.R., 2013. *Hierarchical Capitalism in Latin America: Business, Labor, and the Challenges of Equitable Development*, New York: Cambridge University Press.
- Schrodt, P., Gerner, D. and Yilmaz, O., 2009. Conflict and mediation event observations (CAMEO): An Event Data Framework for a Post-Cold War World. In: Jacob Bercovitch and Scott Sigmund Gartner (eds) *International Conflict Mediation: New Approaches and Findings*. New York: Routledge, pp. 287–304.
- Selmier, W.T. and Oh, C.H., 2013. The Power of Major Trade Languages in Trade and

- Foreign Direct Investment. *Review of International Political Economy*, 20(3), pp. 486–514.
- Shekha, K.R., 2011. Determinants of Latin American Activism: Domestic and Transnational political opportunities and threats. *Sociology Compass*, 5(8), pp. 747–762.
- Sieder, R. ed., 2003. *Multiculturalism in Latin America: Indigenous Rights, Diversity and Democracy*, New York, NY: Palgrave.
- SIL International. (1992). *Ethnologue* (Version 12) [Dataset].
- SIL International. (1996). *Ethnologue* (Version 13) [Dataset].
- SIL International. (1998). *Ethnologue* (Version 11) [Dataset].
- SIL International. (2000). *Ethnologue* (Version 14) [Dataset].
- SIL International. (2005). *Ethnologue* (Version 15) [Dataset].
- SIL International. (2009). *Ethnologue* (Version 16) [Dataset].
- SIL International. (2014). *Ethnologue* (Version 17) [Dataset].
- SIL International. (2015). *Ethnologue* (Version 18) [Dataset].
- SIL International. (2016). *Ethnologue* (Version 19) [Dataset].
- SIL International. (2017). *Ethnologue* (Version 20) [Dataset].
- SIL International. (2018). *Ethnologue* (Version 21) [Dataset].
- Sirakaya A., Cliquet A., and Harris J., 2018. Ecosystem Services in cities: Towards the International Legal Protection of Ecosystem Services in Urban Environments. *Ecosystem Services* 29, pp. 205–212.
- Simmons, E.S., 2016. Market Reforms and Water Wars. *World Politics*, 68(01), pp. 37–

73.

-----, E.S., 2016b. Corn, Markets, and Mobilization in Mexico. *Comparative Politics*, 48(3), pp. 413-431.

-----, E.S., 2016c. *Meaningful Resistance: Market Reforms and the Roots of Social Protest*, Cambridge University Press.

Singh, B., 2015. *Poverty and the Quest for Life: Spiritual and Material Striving in Rural India*. Chicago, IL: University of Chicago Press.

Spain, T. and Gatehouse, M., 2011. Chile Accused of Racist Anti-Terrorism Laws against Mapuches. *States News Service*.

Stroud, C., 2001. African Mother-tongue Programmes and the Politics of Language: Linguistic Citizenship Versus Linguistic Human Rights. *Journal of Multilingual and Multicultural Development*, 22(4), pp. 339–355.

<https://doi.org/10.1080/01434630108666440>

Sumida Huaman, E., 2014. “You’re Trying Hard, but It’s Still Going to Die”: Indigenous Youth and Language Tensions in Peru and the United States. *Anthropology & Education Quarterly*, 45(1), pp. 71–86.

<https://doi.org/10.1111/aeq.12048>

Teo, M. and Loosemore, M., 2010. Community-based protest against construction projects: The social determinants of protest movement continuity. *International Journal of Managing Projects in Business*, 3(2), pp. 216-235.

Teorell, J., Dahlberg, S., Holmberg, S., Rothstein, B., Alvarado Pachon, N., and

- Svensson, R., 2019. *The Quality of Government Standard Dataset* (January 2019) [Dataset]. The University of Gothenburg: The Quality of Government Institute. University of Gothenburg: The Quality of Government Institute, <http://www.qog.pol.gu.se>; doi:10.18157/qogstdjan19
- The AmericasBarometer by the Latin American Public Opinion Project (LAPOP), www.LapopSurveys.org.
- Trejo, G., 2009. Religious Competition and Ethnic Mobilization in Latin America: Why the Catholic Church Promotes Indigenous Movements in Mexico. *American Political Science Review*, 103(3), pp. 323-342.
- Trejo, G., 2014. The Ballot and the Street: An Electoral Theory of Social Protest in Autocracies. *Perspectives on Politics*, 12(2), pp. 332-352.
- United Nations, United Nations Declaration on the Rights of Indigenous Peoples for Indigenous Peoples. *United Nations*. Available at: <https://www.un.org/development/desa/indigenouspeoples/declaration-on-the-rights-of-indigenous-peoples.html> [Accessed August 11, 2021].
- University of Gothenburg., 2019. Quality of Government Data Codebook.
- Usma Wilches, J. A., 2009. Education and Language Policy in Colombia: Exploring Processes of Inclusion, Exclusion, and Stratification in Times of Global Reform. *Profile Issues in Teachers' Professional Development*, (11), pp. 123-142.
- Van Cott, D. L., 1995. Indigenous Peoples and Democracy: Issues for Policy Making. In D. L. Van Cott (Ed.), *Indigenous Peoples and Democracy in Latin America*, pp. 1–28. Cambridge University Press.

- Van Cott, D. L., 2005. *From Movements to Parties in Latin America: The Evolution of Ethnic Politics*. Cambridge: Cambridge University Press.
- Van Cott, D. L., 2010. Indigenous Peoples' Politics in Latin America. *Annual Review of Political Science*, 13(1), pp. 385-405.
- Van Cott, D.L., 2000. *The Friendly Liquidation of the Past: The Politics of Diversity in Latin America*, Pittsburgh: University of Pittsburgh Press.
- Varese, S., 1996. The New Environmentalist Movement of Latin American Indigenous People. In D. Stabinsky & S. Brush, eds. *Valuing Local Knowledge: Indigenous People and Intellectual Property Rights*. Island Press, pp. 122–142.
- Vargas-Hernández, J. and Noruzi, M., 2010. Labor and Work Management Related Issues of Social and Indigenous Movements in Mexico and Latin American Countries. *International Journal of Business and Social Science*, 1(3).
- Verhulst, J., and Walgrave, S., 2009. The First Time Is the Hardest? A Cross-National and Cross-Issue Comparison of First-Time Protest Participants. *Political Behavior*, 31(3), pp. 455–484.
- Viatori, M.S. and Ushigua, G., 2007. Speaking Sovereignty: Indigenous Languages and Self-Determination. *Wicazo Sa Review*, 22(2), pp. 7–21.
- Vigouroux, C. B., 2011. “Bridges and Barriers: Language in African Education and Development.” *Journal of Multilingual and Multicultural Development*, (32)6, pp. 600–602. <https://doi.org/10.1080/01434632.2011.580108>.
- Vogt, M., 2015. The disarticulated Movement: Barriers to Maya mobilization in Post-Conflict Guatemala. *Latin American Politics and Society*, 57(1), pp. 29–50.

- Vogt, M., 2016. A New Dawn? Indigenous Movements and Ethnic Inclusion in Latin America. *International Studies Quarterly*, 60(4), pp. 790–801.
- Vogt, M., 2017. Ethnic stratification and the equilibrium of Inequality: Ethnic conflict in postcolonial States. *International Organization*, 72(1), pp. x105–137.
- Warren, K. and Jackson, J., 2004. *Indigenous Movements, Self-Representation, and the State in Latin America*. 2nd ed. Austin, TX: University of Texas Press.
- Webb, A. and Radcliffe, S., 2013. Mapuche Demands during Educational Reform, the Penguin Revolution and the Chilean Winter of Discontent. *Studies in Ethnicity and Nationalism*, 13(3), pp. 319–341.
- Whitten-Woodring, J. and James, P., 2012. Fourth Estate or Mouthpiece? A Formal Model of Media, Protest, and Government Repression. *Political Communication*, 29(2), pp. 113–136.
- Williams, P. and Chrisman, L., 1994. *Colonial Discourse and Post-Colonial Theory: A Reader*. Columbia University Press.
- Wimmer, A., Cederman, L.-E., and Min, B., 2009. *Ethnic Power Relations Dataset* [Dataset].
- Woddis, J., 1967. *An Introduction to Neo-Colonialism*. 1st ed. New York: International Publishers.
- Wolford, W., 2003. Producing Community: The MST and Land Reform Settlements in Brazil. *Journal of Agrarian Change*, 3(4), pp. 500–520.
- World Bank, 2015. “Indigenous Latin American in the Twenty-First Century: The First

Decade.” International Bank for Reconstruction and Development /The World Bank, Washington D.C.

World Bank. 2020. *World Development Indicators*. The World Bank, Washington D.C.

Wright, C., 2018. Expanding Extractive Industries, Contracting Indigenous Rights?

Gains, Setbacks, and Missed Opportunities in Latin America. In A. Brysk and M. Stohl (Eds.), *Contracting Human Rights: Crisis, Accountability, and Opportunity*. Edward Elgar Publishing.

Yang, D. and Xian, J., 2018. The Correlations Among World Development Indicators.

In: 15th *International Computer Conference on Wavelet Active Media Technology and Information Processing (ICCWAMTIP)*. Chengdu, China: IEEE.

Yashar, D.J., 2005. *Contesting Citizenship in Latin America: The Rise of Indigenous Movements And the Postliberal Challenge*, Cambridge: Cambridge University Press.

Yoshioka, H., 2010. Indigenous Language Usage and Maintenance Patterns among

Indigenous People in the Era of Neoliberal Multiculturalism in Mexico and Guatemala. *Latin American Research Review*, [online] 45(3), pp. 5-34. Available at: <<https://www.jstor.org/stable/40926268>>.

Zittoun, T. et al., 2003. The Use of Symbolic Resources in Developmental

Transitions. *Culture & Psychology*, 9(4), pp. 415–448.

APPENDICES

Appendix A

SUPPLEMENTAL MATERIALS FOR CHAPTER TWO

Table A.1: Summary Statistics for Latin American Sample, 1997-2016

	Mean	Std. Dev.	Median	Minimum	Maximum
Indigenous Language Speakers	18.04	30.27	2.64	0.00	157.82
Indig. Sovereignty Rights (ISR)	0.32	0.40	0.00	0.00	1.00
Primary Ed. Expenditure	12.27	4.48	11.68	2.86	26.72
Secondary Ed. Expenditure	13.22	5.40	13.03	2.98	26.17
Ln Non-Indigenous Speakers	15.66	1.84	15.54	11.86	19.19
Colonial History	0.80	0.40	1.00	0.00	1.00
Ln GDP pc	0.60	0.04	0.52	0.01	0.15
FDI Inflows	3.84	3.57	3.40	-16.59	12.34
GDP Growth	3.50	3.40	3.85	-10.89	18.29
Ln Population	15.98	1.63	15.96	12.31	19.13
Polity	7.58	1.93	8.00	-3.00	10.00
Rural Population Percentage	32.94	16.84	33.71	4.87	73.60

Table A.2: Random Effects Negative Binomial Count Models of Indigenous Language Speakers, Alternative Measures for Educational Expenditure

	Model 1: Small Primary Ed	Model 2 Small Secondary Ed	Model 3 Small Total Ed	Model 4 Large Primary Ed	Model 5 Large Secondary Ed	Model 6 Large Total Ed
Indig. Sovereignty Rights (ISR)	-3.498*** (0.570)	-1.872*** (0.427)	-2.392*** (0.374)	-9.862*** (1.598)	-4.869 (2.964)	-4.226*** (0.574)
Alt. Primary Ed. Expend.	-0.016*** (0.003)	.	.	-0.020*** (0.003)	.	.
ISR*Alt Primary Ed. Expend.	0.043*** (0.011)	.	.	0.056*** (0.011)	.	.
Alt. Secondary Ed. Expend.	.	0.007 (0.006)	.	.	0.013*** (0.004)	.
ISR*Alt. Secondary Ed. Expend.	.	0.014 (0.013)	.	.	-0.009 (0.012)	.
Total Ed. Expenditure	.	.	-0.079*** (0.026)	.	.	-0.086*** (0.026)
ISR*Total Ed. Expenditure	.	.	0.343*** (0.075)	.	.	0.307*** (0.073)
Ln Non-Indigenous Speakers	0.264*** (0.032)	0.270*** (0.035)	0.323*** (0.041)	0.099*** (0.026)	0.132*** (0.033)	0.163*** (0.036)
Colonial History	0.072 (0.932)	0.054 (0.915)	-0.202 (0.911)	0.238 (1.853)	-0.927 (1.727)	-1.313 (1.326)
Ln GDP pc	.	.	.	-10.912*** (2.179)	-11.333*** (2.430)	-9.927*** (2.573)
FDI Inflows	.	.	.	0.026** (0.010)	0.023* (0.012)	0.026** (0.012)
GDP Growth	.	.	.	0.002 (0.004)	0.003 (0.004)	0.002 (0.005)
Ln Population	.	.	.	-0.925*** (0.292)	-0.328 (0.650)	-0.023 (0.250)
Polity	.	.	.	0.014* (0.008)	0.006 (0.009)	0.015 (0.009)
Rural Population Percentage	.	.	.	-0.107*** (0.015)	-0.080** (0.039)	-0.065*** (0.019)
Constant	0.090	-1.072	-1.449	27.258***	13.484	6.678

	(1.041)	(1.025)	(1.045)	(5.987)	(14.270)	(5.156)
Observations	510	510	510	468	468	468
Log-likelihood	-1075	-1081	-1076	-967.2	-989.6	-985.9

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A.3: Fixed Effects Negative Binomial Count Models of Indigenous Language Speakers, Alternative Measures for Educational Expenditure

	Model 1: Small Primary Ed	Model 2: Small Secondary Ed	Model 3: Small Total Ed	Model 4: Large Primary Ed	Model 5: Large Secondary Ed	Model 6: Large Total Ed
Indig. Sovereignty Rights (ISR)	21.854*** (5.114)	22.196*** (5.119)	21.931*** (5.108)	34.684*** (8.975)	30.025*** (9.247)	35.132*** (9.055)
Alt. Primary Ed. Expend.	-0.016*** (0.004)	.	.	-0.017*** (0.004)	.	.
ISR*Alt Primary Ed. Expend.	0.043*** (0.012)	.	.	0.044*** (0.012)	.	.
Alt. Secondary Ed. Expend.	.	0.008 (0.006)	.	.	0.005 (0.006)	.
ISR*Alt. Secondary Ed. Expend.	.	0.024* (0.013)	.	.	0.021 (0.013)	.
Total Ed. Expenditure	.	.	-0.049* (0.026)	.	.	-0.109*** (0.026)
ISR*Total Ed. Expenditure	.	.	0.246*** (0.073)	.	.	0.346*** (0.072)
Ln Non-Indigenous Speakers	0.240*** (0.045)	0.266*** (0.045)	0.277*** (0.047)	0.067 (0.048)	0.094* (0.050)	0.095** (0.048)
Colonial History	-4.364** (1.707)	-4.188** (1.707)	-4.298** (1.707)	-8.466*** (3.102)	-6.515** (3.219)	-8.626*** (3.137)
Ln GDP pc	.	.	.	-5.830** (2.640)	-7.980*** (2.680)	-6.199** (2.667)
FDI Inflows	.	.	.	0.018 (0.013)	0.016 (0.014)	0.025* (0.013)
GDP Growth	.	.	.	0.002 (0.006)	0.001 (0.006)	0.002 (0.006)
Ln Population	.	.	.	-0.580 (0.554)	-0.168 (0.585)	-0.569 (0.564)
Polity	.	.	.	0.024** (0.010)	0.012 (0.010)	0.023** (0.010)
Rural Population Percentage	.	.	.	-0.088*** (0.025)	-0.076*** (0.027)	-0.099*** (0.026)
Observations	510	510	510	468	468	468
Log-likelihood	-1028	-1029	-1032	-930.8	-937.9	-931.4

Country Fixed Effects Included Though Not Reported Here; Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Table A.4: Random and Fixed Effects Negative Binomial Count Models of Indigenous Language Speakers, Alternative Democracy Control

	Model 1: RE Large Primary Ed	Model 2: RE Large Secondary Ed	Model 3: FE Large Primary Ed	Model 4: FE Large Secondary Ed
Indig. Sovereignty Rights (ISR)	-2.988*** (0.575)	-3.253*** (0.587)	37.996*** (13.102)	42.144*** (13.714)
Primary Ed. Expenditure	-0.021 (0.016)	.	-0.032* (0.017)	.
ISR*Primary Ed. Expenditure	0.117*** (0.030)	.	0.126*** (0.028)	.
Secondary Ed. Expenditure	.	-0.035* (0.019)	.	-0.038* (0.020)
ISR*Secondary Ed. Expenditure	.	0.099*** (0.032)	.	0.086*** (0.030)
Ln Non-Indigenous Speakers	0.185*** (0.047)	0.151*** (0.047)	0.131*** (0.048)	0.080 (0.049)
Colonial History	1.116 (1.261)	1.012 (1.266)	-9.566** (4.547)	-10.805** (4.775)
Ln GDP pc	3.691 (3.553)	7.474** (3.743)	2.931 (3.829)	7.067* (4.172)
FDI Inflows	0.047*** (0.014)	0.045*** (0.014)	0.052*** (0.015)	0.048*** (0.016)
GDP Growth	0.006 (0.007)	0.003 (0.007)	0.001 (0.007)	-0.004 (0.007)
Ln Population	0.692** (0.299)	0.696** (0.298)	-0.927 (0.911)	-1.131 (0.955)
<i>V-Dem EDI</i>	1.255*** (0.393)	1.113*** (0.403)	1.003*** (0.358)	0.980*** (0.371)
Rural Population Percentage	0.035 (0.027)	0.031 (0.026)	-0.094* (0.048)	-0.112** (0.052)
Constant	-13.269** (6.091)	-12.474** (6.039)	.	.
Observations	297	285	297	285
Log-likelihood	-651.3	-640.7	-605.1	-598.4

Country Fixed Effects Included in Models 3-4 Though Not Reported Here; Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table A.5: Random Effects Negative Binomial Count Models of Indigenous Language Speakers, Using Vote-based Indigenous Sovereignty Rights Component

	Model 1: Small Primary Ed	Model 2: Small Secondary Ed	Model 3: Large Primary Ed	Model 4: Large Secondary Ed
Indig. Sovereignty Vote (ISV)	-1.349*** (0.423)	-1.614*** (0.432)	-1.140** (0.520)	-1.638*** (0.510)
Primary Ed. Expenditure	-0.003 (0.018)	.	-0.000 (0.019)	.
ISV*Primary Ed. Expenditure	0.050** (0.023)	.	0.034 (0.022)	.
Secondary Ed. Expenditure	.	-0.015 (0.017)	.	-0.046** (0.021)
ISV*Secondary Ed. Expenditure	.	0.068*** (0.026)	.	0.082*** (0.026)
Ln Non-Indigenous Speakers	0.213*** (0.046)	0.221*** (0.044)	0.137** (0.060)	0.121* (0.062)
Colonial History	0.244 (0.922)	0.251 (0.913)	1.463 (1.062)	1.612 (1.052)
Ln GDP pc	.	.	8.685** (3.506)	13.671*** (3.534)
FDI Inflows	.	.	0.054*** (0.015)	0.051*** (0.014)
GDP Growth	.	.	0.007 (0.008)	0.003 (0.008)
Ln Population	.	.	0.935*** (0.267)	1.008*** (0.279)
Polity	.	.	0.034 (0.021)	0.029 (0.021)
Rural Population Percentage	.	.	0.074*** (0.023)	0.074*** (0.023)
Constant	-0.257 (1.100)	-0.301 (1.097)	-18.918*** (5.190)	-19.753*** (5.365)
Observations	338	326	297	285
Log-likelihood	-749.7	-738.0	-669.2	-653.0

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A.6: Fixed Effects Negative Binomial Count Models of Indigenous Language Speakers, Using Vote-based Indigenous Sovereignty Rights Component

	Model 1: Small Primary Ed	Model 2: Small Secondary Ed	Model 3: Large Primary Ed	Model 4: Large Secondary Ed
Indig. Sovereignty Vote (ISV)	7.059*** (1.730)	6.805*** (1.746)	16.941*** (4.505)	15.901*** (4.553)
Primary Ed. Expenditure	0.004 (0.020)	.	-0.015 (0.021)	.
ISV*Primary Ed. Expenditure	0.034 (0.024)	.	0.036 (0.023)	.
Secondary Ed. Expenditure	.	0.001 (0.020)	.	-0.034 (0.021)
ISV*Secondary Ed. Expenditure	.	0.047* (0.028)	.	0.057** (0.028)
Ln Non-Indigenous Speakers	0.188*** (0.054)	0.196*** (0.051)	0.069 (0.053)	0.052 (0.051)
Colonial History	-4.126** (1.711)	-4.137** (1.714)	-14.043*** (4.676)	-13.314*** (4.672)
Ln GDP pc	.	.	4.164 (4.101)	7.136 (4.372)
FDI Inflows	.	.	0.054*** (0.017)	0.051*** (0.016)
GDP Growth	.	.	-0.001 (0.007)	-0.003 (0.007)
Ln Population	.	.	-1.847* (0.952)	-1.644* (0.939)
Polity	.	.	0.029 (0.021)	0.024 (0.021)
Rural Population Percentage	.	.	-0.151*** (0.049)	-0.144*** (0.051)
Observations	338	326	297	285
Log-likelihood	-700.1	-688.1	-618.0	-604.2

Country Fixed Effects Included Though Not Reported Here; Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A.7: Random Effects Negative Binomial Count Models of Indigenous Language Speakers, Using Special Constituency (SC)-based Indigenous Sovereignty Rights Component

	Model 1: Small Primary Ed	Model 2: Small Secondary Ed	Model 3: Large Primary Ed	Model 4: Large Secondary Ed
Indig. Sovereignty SC (ISSC)	-2.707*** (0.392)	-2.668*** (0.431)	-2.851*** (0.528)	-2.909*** (0.537)
Primary Ed. Expenditure	-0.005 (0.011)	.	-0.006 (0.013)	.
ISSC*Primary Ed. Expenditure	0.101*** (0.025)	.	0.108*** (0.025)	.
Secondary Ed. Expenditure	.	-0.006 (0.015)	.	-0.025 (0.017)
ISSC*Secondary Ed. Expenditure	.	0.067** (0.028)	.	0.087*** (0.029)
Ln Non-Indigenous Speakers	0.232*** (0.038)	0.223*** (0.036)	0.153*** (0.046)	0.139*** (0.048)
Colonial History	0.464 (0.911)	0.457 (0.899)	0.344 (1.301)	0.418 (1.260)
Ln GDP pc	.	.	1.441 (3.665)	4.975 (3.718)
FDI Inflows	.	.	0.049*** (0.014)	0.052*** (0.015)
GDP Growth	.	.	0.009 (0.007)	0.005 (0.007)
Ln Population	.	.	0.609** (0.306)	0.521* (0.303)
Polity	.	.	0.034 (0.021)	0.031 (0.022)
Rural Population Percentage	.	.	0.021 (0.027)	0.019 (0.026)
Constant	-0.170 (1.051)	-0.057 (1.037)	-9.772 (6.288)	-8.134 (6.210)
Observations	338	326	297	285
Log-likelihood	-729.4	-721.8	-653.7	-644.7

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A.8: Fixed Effects Negative Binomial Count Models of Indigenous Language Speakers, Using Special Constituency (SC)-based Indigenous Sovereignty Rights Component

	Model 1: Small Primary Ed	Model 2: Small Secondary Ed	Model 3: Large Primary Ed	Model 4: Large Secondary Ed
Indig. Sovereignty SC (ISSC)	-0.316 (0.268)	0.135 (0.371)	-1.728 (1.146)	-2.508** (1.226)
Primary Ed. Expenditure	-0.003 (0.013)	.	-0.019 (0.014)	.
ISSC*Primary Ed. Expenditure	0.114*** (0.025)	.	0.111*** (0.023)	.
Secondary Ed. Expenditure	.	0.001 (0.018)	.	-0.038** (0.019)
ISSC*Secondary Ed. Expenditure	.	0.055* (0.029)	.	0.083*** (0.027)
Ln Non-Indigenous Speakers	0.210*** (0.049)	0.197*** (0.051)	0.084* (0.046)	0.050 (0.049)
Colonial History	3.358*** (0.169)	3.345*** (0.191)	3.557*** (0.270)	3.386*** (0.282)
Ln GDP pc	.	.	1.643 (3.900)	6.318 (4.155)
FDI Inflows	.	.	0.051*** (0.015)	0.054*** (0.016)
GDP Growth	.	.	0.002 (0.007)	-0.004 (0.007)
Ln Population	.	.	-0.967 (0.914)	-1.728* (0.929)
Polity	.	.	0.032 (0.019)	0.031 (0.020)
Rural Population Percentage	.	.	-0.116** (0.047)	-0.152*** (0.050)
Observations	338	326	297	285
Log-likelihood	-691.5	-687.7	-608.6	-601.7

Country Fixed Effects Included Though Not Reported Here; Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A.9: Random Effects Negative Binomial Count Models of Indigenous Language Speakers, Using Political Administrative Divisions (PAD)-based Indigenous Sovereignty Rights Component

	Model 1: Small Primary Ed	Model 2: Small Secondary Ed	Model 3: Large Primary Ed	Model 4: Large Secondary Ed
Indig. Sovereignty PAD (ISPAD)	-3.083*** (0.427)	-3.118*** (0.480)	-3.452*** (0.566)	-3.601*** (0.587)
Primary Ed. Expenditure	-0.006 (0.010)	.	-0.011 (0.012)	.
ISPAD*Primary Ed. Expenditure	0.128*** (0.029)	.	0.143*** (0.027)	.
Secondary Ed. Expenditure	.	-0.006 (0.014)	.	-0.025 (0.017)
ISPAD*Secondary Ed. Expenditure	.	0.082*** (0.032)	.	0.110*** (0.032)
Ln Non-Indigenous Speakers	0.239*** (0.038)	0.228*** (0.036)	0.153*** (0.045)	0.138*** (0.046)
Colonial History	0.895 (0.966)	0.966 (0.972)	1.422 (1.216)	1.696 (1.199)
Ln GDP pc	.	.	0.236 (3.710)	3.521 (3.776)
FDI Inflows	.	.	0.049*** (0.014)	0.051*** (0.015)
GDP Growth	.	.	0.009 (0.007)	0.005 (0.007)
Ln Population	.	.	0.570* (0.308)	0.477 (0.305)
Polity	.	.	0.030 (0.021)	0.026 (0.023)
Rural Population Percentage	.	.	0.006 (0.027)	0.005 (0.026)
Constant	-0.674 (1.090)	-0.594 (1.092)	-9.397 (6.223)	-7.941 (6.185)
Observations	338	326	297	285
Log-likelihood	-724.4	-716.8	-647.6	-639.6

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A.10: Fixed Effects Negative Binomial Count Models of Indigenous Language Speakers, Using Political Administrative Divisions (PAD)-based Indigenous Sovereignty Rights Component

	Model 1: Small Primary Ed	Model 2: Small Secondary Ed	Model 3: Large Primary Ed	Model 4: Large Secondary Ed
Indig. Sovereignty PAD (ISPAD)	-0.621** (0.278)	-0.046 (0.376)	-2.712** (1.145)	-3.296*** (1.254)
Primary Ed. Expenditure	-0.004 (0.012)	.	-0.021 (0.014)	.
ISPAD*Primary Ed. Expenditure	0.147*** (0.027)	.	0.148*** (0.024)	.
Secondary Ed. Expenditure	.	-0.001 (0.017)	.	-0.045** (0.018)
ISPAD*Secondary Ed. Expenditure	.	0.070** (0.030)	.	0.113*** (0.028)
Ln Non-Indigenous Speakers	0.217*** (0.048)	0.202*** (0.051)	0.090** (0.045)	0.053 (0.049)
Colonial History	3.359*** (0.168)	3.340*** (0.189)	3.475*** (0.266)	3.305*** (0.282)
Ln GDP pc	.	.	1.054 (3.850)	7.131* (4.102)
FDI Inflows	.	.	0.055*** (0.015)	0.058*** (0.016)
GDP Growth	.	.	0.002 (0.006)	-0.004 (0.007)
Ln Population	.	.	-1.441 (0.888)	-2.087** (0.928)
Polity	.	.	0.026 (0.019)	0.028 (0.020)
Rural Population Percentage	.	.	-0.143*** (0.046)	-0.170*** (0.050)
Observations	338	326	297	285
Log-likelihood	-687.2	-686.7	-600.9	-598.2

Country Fixed Effects Included Though Not Reported Here; Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A.11: Random Effects OLS Regression Models of Indigenous Language Speakers

	Model 1: Small Primary Ed	Model 2: Small Secondary Ed	Model 3: Large Primary Ed	Model 4: Large Secondary Ed
Indig. Sovereignty Rights (ISR)	-38.134*	-29.960	-39.457**	-34.017*
	(21.823)	(23.398)	(18.800)	(19.565)
Primary Ed. Expenditure	-0.518	.	-0.904*	.
	(0.377)		(0.466)	
ISR*Primary Ed. Expenditure	3.686***	.	4.818***	.
	(0.764)		(0.874)	
Secondary Ed. Expenditure	.	-0.283	.	-0.900*
		(0.379)		(0.512)
ISR*Secondary Ed. Expenditure	.	2.825***	.	3.948***
		(0.805)		(0.971)
Ln Non-Indigenous Speakers	11.124***	10.239***	6.513***	4.546*
	(1.923)	(1.980)	(2.495)	(2.629)
Colonial History	5.890	6.375	23.254	24.200
	(20.087)	(21.316)	(18.937)	(17.964)
Ln GDP pc	.	.	176.250**	213.225**
			(84.704)	(94.432)
FDI Inflows	.	.	0.834*	0.822*
			(0.432)	(0.467)
GDP Growth	.	.	0.134	0.038
			(0.274)	(0.299)
Ln Population	.	.	5.546	8.504
			(5.682)	(5.486)
Polity	.	.	3.965***	3.850***
			(0.802)	(0.844)
Rural Population Percentage	.	.	0.351	0.498
			(0.373)	(0.372)
Constant	-158.007***	-147.015***	-246.860***	-269.277***
	(33.282)	(34.889)	(94.935)	(91.125)
Observations	338	326	297	285

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A.12: Fixed Effects OLS Regression Models of Indigenous Language Speakers

	Model 1: Small Primary Ed	Model 2: Small Secondary Ed	Model 3: Large Primary Ed	Model 4: Large Secondary Ed
Indig. Sovereignty Rights (ISR)	-5.875	13.569	-460.057**	-655.648***
	(28.224)	(30.211)	(218.724)	(231.783)
Primary Ed. Expenditure	-0.590	.	-2.000***	.
	(0.378)		(0.518)	
ISR*Primary Ed. Expenditure	4.112***	.	5.916***	.
	(0.772)		(0.892)	
Secondary Ed. Expenditure	.	-0.294	.	-1.104**
		(0.386)		(0.530)
ISR*Secondary Ed. Expenditure	.	3.086***	.	4.392***
		(0.814)		(0.957)
Ln Non-Indigenous Speakers	13.675***	12.307***	8.494***	6.401**
	(2.098)	(2.164)	(2.428)	(2.541)
Colonial History	48.703***	45.554***	216.704***	293.420***
	(9.181)	(9.766)	(81.391)	(86.341)
Ln GDP pc	.	.	114.553	88.929
			(95.898)	(109.492)
FDI Inflows	.	.	0.600	0.655
			(0.417)	(0.449)
GDP Growth	.	.	0.023	0.018
			(0.258)	(0.281)
Ln Population	.	.	51.827***	69.158***
			(19.746)	(20.731)
Polity	.	.	3.199***	3.294***
			(0.778)	(0.819)
Rural Population Percentage	.	.	-0.361	0.348
			(0.523)	(0.516)
Observations	338	326	297	285

Country Fixed Effects Included Though Not Reported Here; Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A.13: Random Effects Poisson Regression Models of Indigenous Language Speakers

	Model 1: Small Primary Ed	Model 2: Small Secondary Ed	Model 3: Large Primary Ed	Model 4: Large Secondary Ed
Indig. Sovereignty Rights (ISR)	-1.770* (0.924)	-1.002 (0.930)	-2.230* (1.183)	-1.767 (1.289)
Primary Ed. Expenditure	-0.024** (0.011)	.	-0.045*** (0.012)	.
ISR*Primary Ed. Expenditure	0.175*** (0.016)	.	0.134*** (0.019)	.
Secondary Ed. Expenditure	.	0.011 (0.013)	.	-0.047*** (0.014)
ISR*Secondary Ed. Expenditure	.	0.085*** (0.017)	.	0.070*** (0.019)
Ln Non-Indigenous Speakers	0.220*** (0.024)	0.200*** (0.021)	0.096*** (0.029)	0.033 (0.027)
Colonial History	2.986*** (1.025)	3.150*** (1.016)	3.175** (1.480)	3.314** (1.557)
Ln GDP pc	.	.	9.192*** (3.140)	18.617*** (2.944)
FDI Inflows	.	.	0.071*** (0.011)	0.067*** (0.011)
GDP Growth	.	.	-0.003 (0.005)	-0.010** (0.005)
Ln Population	.	.	-0.516 (0.517)	-0.964* (0.576)
Polity	.	.	0.036*** (0.014)	0.031** (0.014)
Rural Population Percentage	.	.	-0.075** (0.031)	-0.096*** (0.034)
Constant	-3.166*** (0.966)	-3.382*** (0.980)	9.567 (9.862)	18.387 (11.253)
Observations	338	326	297	285
Log-likelihood	-865.2	-919.5	-713.7	-717.2

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A.14: Fixed Effects Poisson Regression Models of Indigenous Language Speakers

	Model 1: Small Primary Ed	Model 2: Small Secondary Ed	Model 3: Large Primary Ed	Model 4: Large Secondary Ed
Indig. Sovereignty Rights (ISR)	20.155*** (5.080)	21.118*** (5.080)	54.130*** (11.005)	63.810*** (10.950)
Primary Ed. Expenditure	-0.023** (0.011)	.	-0.040*** (0.012)	.
ISR*Primary Ed. Expenditure	0.174*** (0.016)	.	0.126*** (0.019)	.
Secondary Ed. Expenditure	.	0.012 (0.013)	.	-0.046*** (0.015)
ISR*Secondary Ed. Expenditure	.	0.083*** (0.017)	.	0.068*** (0.019)
Ln Non-Indigenous Speakers	0.220*** (0.024)	0.200*** (0.021)	0.083*** (0.029)	0.024 (0.027)
Colonial History	-4.178** (1.699)	-4.049** (1.701)	-15.327*** (3.776)	-18.357*** (3.761)
Ln GDP pc	.	.	9.678*** (3.172)	19.086*** (2.991)
FDI Inflows	.	.	0.072*** (0.011)	0.067*** (0.011)
GDP Growth	.	.	-0.005 (0.005)	-0.012*** (0.005)
Ln Population	.	.	-2.099*** (0.720)	-2.705*** (0.710)
Polity	.	.	0.023* (0.014)	0.017 (0.014)
Rural Population Percentage	.	.	-0.159*** (0.038)	-0.188*** (0.039)
Observations	338	326	297	285
Log-likelihood	-806.8	-861.8	-651.0	-652.6

Country Fixed Effects Included Though Not Reported Here; Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A.15: Fixed Effects Negative Binomial Regression Models of Indigenous Language Speakers Including both Country and Year Fixed Effects

	Model 1	Model 2	Model 3	Model 4
Indig. Sovereignty Rights (ISR)	19.720*** (5.113)	20.348*** (5.122)	10.802 (14.694)	27.863* (16.224)
Primary Ed. Expenditure	-0.078*** (0.015)	.	-0.046*** (0.014)	.
ISR*Primary Ed. Expenditure	0.184*** (0.026)	.	0.174*** (0.023)	.
Secondary Ed. Expenditure	.	-0.056*** (0.018)	.	-0.066*** (0.019)
ISR*Secondary Ed. Expenditure	.	0.140*** (0.028)	.	0.157*** (0.026)
Ln Non-Indigenous Speakers	0.311*** (0.048)	0.252*** (0.052)	0.210*** (0.044)	0.167*** (0.047)
Colonial History	-4.178** (1.709)	-4.224** (1.714)	1.482 (5.440)	-5.101 (6.118)
Ln GDP pc	.	.	19.002*** (5.042)	21.395*** (5.407)
FDI Inflows	.	.	0.041*** (0.014)	0.044*** (0.015)
GDP Growth	.	.	0.003 (0.007)	-0.003 (0.007)
Ln Population	.	.	2.062* (1.249)	0.483 (1.428)
Polity	.	.	0.059*** (0.019)	0.053*** (0.019)
Rural Population Percentage	.	.	-0.198*** (0.054)	-0.193*** (0.058)
Observations	338	326	297	285
Log-likelihood	-658.9	-656.9	-574.2	-571.4

Country Fixed Effects Included Though Not Reported Here; Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Appendix B

SUPPLEMENTAL MATERIAL FOR CHAPTER 3

Part B.1: Spanish Translations

Below are the original quotes from José Quirog (2017) as found throughout Chapter Three. All original quotes are in Spanish, translated to English by the author.

Footnote 27

Original text: “En los campos de los nuevos latifundistas, ellos [los Mapuches] tenían prohibido hablar en su lengua. Los huincas [hombres blancos] cortaban la lengua y orejas de los Mapuches si los escuchaban hablando Mapudungun” (José Quirog, 2017, p. 2).

Translation: “In the land of the new *latifundistas*, they [the Mapuches] were prohibited from speaking their language. The white men cut the tongues and ears of the Mapuches if they heard someone speaking Mapudungun.”

Footnote 28

Original text: “Somos el molesto mosquito en el brazo de Benetton. De hecho va mucho más allá. Una ocupación como la nuestra pone en jaque la existencia de otras compañías en la región, nacionales e internacionales. Este tipo de ocupación siempre genera imitación por parte de otras comunidades. Estamos lentamente plantando la idea de recuperar control territorial” (José Quirog, 2017, p. 4).

Translation: “We are the mosquito who bothers the arm of [The United Colours of] Benetton. Indeed, this goes much further. An occupation such as ours puts other companies in check – in the region, nationally, and internationally. This type of occupation generates imitation from other communities. We are slowly planting the idea of recuperating territorial control.”

Part B.2: A Note on *Ethnologue* and Language Classification

I developed my own dataset for this Chapter, using the data from the *Ethnologue* archives (SIL International 1988-2018). In order to build the dataset used in this Chapter, I downloaded each language report for each country for each year individually. I collated data from 20 countries (Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Uruguay, and Venezuela) in the following years: 1988, 1992, 1996, 2000, 2005, 2009, 2014, 2015, 2016, 2017, and 2018. This is my panel data. I then entered the data into Excel spreadsheets. Originally, I had a workbook for each country – 11 tabs (i.e., spreadsheets) representing each of my years.

Each spreadsheet had seven headings: country, language, source, year of source, status, and indigeneity. Country was consistent for all the data relating to the same country. For example, when coding the languages of Belize in 2018, the variable remained consistently labelled *Belize*. “Language” was used to denote the name of each language, as *Ethnologue* used it. Sometimes, languages had slightly altered spellings or went by several names. Although it is possible that there is some human error in my data collation, the data remains as consistent as possible across years. Some data is missing, as noted in Chapter 3. This is due to two primary reasons: *Ethnologue* regrouped or renamed the language or there was no data available in that particular year. “Number of Speakers” denotes the estimated number of speakers of the associated language. “Source” indicates where *Ethnologue* – and therefore, where I – got the information. The

most common sources were: censuses, SIL measures, and the extensive and beautifully done work of Dr. Mily Crevels of the University of Leiden. “Year of Source” indicates the year in which the source was published. “Status” is only available for the years 2015-2018. It is a measure used and developed by *Ethnologue* to indicate how healthy the language is and/or its purpose. The full discussion of *Ethnologue*’s status classification can be found on their website (www.ethnologue.com). Finally, “Indigenous Language or No” is a binary measure of whether or not the language was indigenous to that country. Below, Figure B.1 gives an example of what my raw Excel files looked like.

	A	B	C	D	E	F	G	H
1	Country	Language	Number of Speakers	Source	Year of Source	Status	Indigenous Language or No	Year
2	Belize	Belize Kriol English	130000	UNSD	2014	3 - Wider Communication	0	2017
3	Belize	English	240000	UNSD	2014	1 - National	0	2017
4	Belize	Garifuna	8440	UNSD	2014	6b - Threatened	1	2017
5	Belize	Kekchí	176000	UNSD	2014	6a - Vigorous	1	2017
6	Belize	Maya Mopán	10600	UNSD	2014	5 - Developing	1	2017
7	Belize	Maya Yucatec	2520	UNSD	2014	6b - Threatened	1	2017
8	Belize	Plautdietsch	9360	UNSD	2014	6a - Vigorous	0	2017
9	Belize	Spanish	196000	Instituto Cervantes	2012	3 - Wider Communication	0	2017

Figure B.1: Raw Excel Data for Belize’s Languages in 2017

The raw Excel files were then cleaned up. That is, the classifications such as “few speakers” were coded automatically at 10. As mentioned in the Chapter, this value is arbitrary, but it is also irrelevant, as I was not looking at languages with fewer than one hundred speakers. Furthermore, those languages with numbers of speakers that were in ranges (such as 10 to 20 or 1500 to 3000) were averaged to create a best estimate of the

number of speakers. Although averaging the ranges does not provide a perfect understanding of the number of speakers, this was the best option for quantitative analysis because it gave me a single value with which to work.

After cleaning the raw Excel files for each country individually, I converted them all to .csv files. I then combined all of the years within each country, and then combined those .csv files so that I had true panel data. With this dataset, I created the final variables described in this Chapter's main analysis section.

Working with languages is never straightforward. Languages are alive – their survival and measurement are both reliant on humans, who are full of errors, changing opinions, and misunderstanding. Because of this, the measurements from *Ethnologue* are sometimes contradictory, and have been problematized by scholars previously⁶⁷. To this end, several additional coding caveats are in order. First, even when *Ethnologue* began releasing data annually, the compilers often pulled from the same sources each year. That is, the languages are not always re-measured every year, even if a new edition of *Ethnologue* is available. The compilers are reliant on other people to conduct the quantification, and therefore, if no one submits a new statistic, the data remains the same. Consequently, there is less temporal variation than there would be in an ideal dataset. *Ethnologue* is also run by SIL international, which is a religious (in this case, Christian) organization focused on missionary work (Anon, 2018). This could, in theory, affect the unbiased nature of the data collection, as SIL could have ulterior motivations in

⁶⁷ Including Liu and Pizzi (2017)

developing *Ethnologue* beyond the academic or theoretical measurement of spoken language. However, I argue that these potential effects are mitigated by the third-party data collection mentioned above. *Ethnologue*'s language records are mostly curated and assembled from academic sources, rather than from missionaries working in the field⁶⁸. This helps to offset any concerns of *Ethnologue*'s broader agenda creeping into its measurement of language usage, as in this case it leverages more objective sources for the actual task of measurement. It then simply compiles these records into the most comprehensive aggregate measures of language usage for each country and language over time – so as to provide interested parties with the most accurate records of language usage across the world

Next, and as with most datasets, the original source materials suffered from a missingness problem with the earlier years of some countries. In some instances, *Ethnologue* ceases data collection for some languages because of its erroneous classification of said language as distinct. “However, this was not a substantial issue, as it only arose in an extremely small subset of all indigenous languages coded. Additionally, for those languages that faced such missingness issues, they typically corresponded to languages with fewer than 50 living speakers. Additionally, the vast majority of cases are not missing, and those cases that are missing are typically for spoken languages with very few individuals⁶⁹ and are unlikely to significantly affect my aggregate summed indigenous language measure. Second, some of the original

⁶⁸ Although there are instances where SIL is the only organization to have measured a specific language.

⁶⁹ Many languages with missing data had fewer than fifty speakers

Ethnologue measures for the older years in the time series data are string variables. Their labels are those such as “few speakers” or “individuals in a single family⁷⁰.” For these ambiguous entries, I coded them systematically at 10. This value is arbitrary, but it is also unlikely to have any effect on the present analysis. Third, the number of speakers of some languages was likewise (albeit rarely) recorded as “10 or 20” or “between 5,000 and 5,500.” In these instances, I averaged the two values given to create an approximation of the number of speakers. Fourth, sometimes the number of languages spoken in a given country fluctuated from year to year because certain languages are included/excluded, renamed, or discovered to be the same language. If no data existed for a language in instances such as this, it is assigned a missing value (not 0 speakers). Finally, *Ethnologue*’s categorization of how much vitality a language has is somewhat arbitrary (see a more nuanced discussion in Duchêne and Heller, 2008), and could lead to increased problems.

However, despite all of the aforementioned issues with *Ethnologue* (especially including its strong Christian missionary bias), which could have primed my data and testing against, my results from the body of the Chapter are still statistically significant in support of my hypothesis.

⁷⁰ I assumed that a family was made up of 4 members – this value will not affect my data analysis since I am only looking at languages with more than 50 speakers

Part B.3: Control Variables

A majority of my control variables were taken from the *Quality of Government* time series dataset (2019). Their original names, as well as their descriptors are listed below. The descriptors are *all* direct quotes from the *Quality of Government* codebook from 2019.

Table B.1: Variable Sources and Descriptions

Original Label	My Label	Source	Description
bl_lpmf	PrimarySchoolPer	Barro and Lee	“Percentage with Primary Schooling, Female and Male over the age of 25” (p. 117)
bl_lsmf	SecondarySchoolPer	Barro and Lee	“Percentage with Secondary Schooling, Female and Male over the age of 25” (p. 117)
ht_colonial	ColonialOrigin		“This is a tenfold classification of the former colonial ruler of the country. Following Bernard et al (2004), we have excluded the British settler colonies (the US, Canada, Australia, Israel and New Zealand), and exclusively focused on ‘Western overseas’ colonialism. This implies that only Western colonizers (e.g., excluding Japanese colonialism), and only countries located in the non-Western hemisphere ‘overseas’ (e.g., excluding Ireland & Malta), have been coded. Each country that has been colonized since 1700 is coded. In cases of several colonial powers, the last one is counted, if it lasted for 10 years or longer.” (p. 363)
p_polity2	Polity	Polity Project	“Revised Combined Polity Score: The polity score is computed by subtracting the p_autoc score from the p_democ score; the resulting unified polity scale ranges from +10 (strongly democratic) to -10 (strongly autocratic). The revised version of the polity variable is designed to facilitate the use of the polity regime measure in time-series analyses. It modifies the combined annual polity score by applying a

			simple treatment, or ‘fix’ to convert instances of ‘standardized authority scores’ (i.e., -66, -77, and -88) to conventional polity scores (i.e., within the range, -10 to +10)” (p. 516)
--	--	--	---

Table B.1: Variable Sources and Descriptions (continued)

wdi_debt	CentralGovtDebt	World Bank’s World Development Index	“Debt is the entire stock of direct government fixed-term contractual obligations to others outstanding on a particular date. It includes domestic and foreign liabilities such as currency and money deposits, securities other than shares, and loans. It is the gross amount of government liabilities reduced by the amount of equity and financial derivatives held by the government. Because debt is a stock rather than a flow, it is measured as of a given date, usually the last day of the fiscal year” (p. 667)
wdi_emp	EmploymentPer	World Bank’s World Development Index	“Employers refers are those workers who, working on their own account or with one or a few partners, hold the type of jobs defined as a ‘self-employment jobs’ i.e., jobs where the remuneration is directly dependent upon the profits derived from the goods and services produced), and, in this capacity, have engaged, on a continuous basis, one or more persons to work for them as employee(s). Modeled ILO estimate” (p. 670)
wdi_empagr	EmploymentAgPer	World Bank’s World Development Index	“Employment in agriculture as a percentage of all employment. Employment is defined as persons of working age who were engaged in any activity to produce goods or provide services for pay or profit, whether at work during the reference period or not at work due to temporary absence from a job, or to working-time arrangement. The agriculture sector consists of activities in agriculture, hunting, forestry and fishing, in accordance with division 1 (ISIC 2) or categories A-B (ISIC 3) or category A (ISIC 4). Modeled ILO estimate” (p. 671)

Table B.1: Variable Sources and Descriptions (Continued)

wdi_empind	EmploymentIndPer	World Bank's World Development Index	“Employment in industry as a percentage of all employment. Employment is defined as persons of working age who were engaged in any activity to produce goods or provide services for pay or profit, whether at work during the reference period or not at work due to temporary absence from a job, or to working-time arrangement. The industry sector consists of mining and quarrying, manufacturing, construction, and public utilities (electricity, gas, and water), in accordance with divisions 2-5 (ISIC 2) or categories C-F (ISIC 3) or categories B-F (ISIC 4). Modeled ILO estimate.” (p. 673)
wdi_empser	EmploymentSerPer	World Bank's World Development Index	“Total employment in services as percentage of total employment. Employment is defined as persons of working age who were engaged in any activity to produce goods or provide services for pay or profit, whether at work during the reference period or not at work due to temporary absence from a job, or to working-time arrangement. The services sector consists of wholesale and retail trade and restaurants and hotels; transport, storage, and communications; financing, insurance, real estate, and business services; and community, social, and personal services, in accordance with divisions 6-9 (ISIC 2) or categories G-Q (ISIC 3) or categories G-U (ISIC 4). Modeled ILO estimate” (p. 678)
wdi_fdiout	FDINetoutput	World Bank's World Development Index	“Foreign direct investment are the net outflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows net outflows of investment from the

			reporting economy to the rest of the world and is divided by GDP” (p. 684)
--	--	--	--

Table B.1: Variable Sources and Descriptions (Continued)

wdi_gdpcapcon2010	GDPpc	World Bank’s World Development Index	“GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant 2010 U.S. dollars” (p. 687)
wdi_intrate	InterestRate	World Bank’s World Development Index	“Real interest rate is the lending interest rate adjusted for inflation as measured by the GDP deflator. The terms and conditions attached to lending rates differ by country, however, limiting their comparability” (p. 704)
wdi_pop	Population	World Bank’s World Development Index	“Total population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship. The values shown are midyear estimates” (p. 720)
wdi_poprul	RuralPopPer	World Bank’s World Development Index	“Rural population refers to people living in rural areas as defined by national statistical offices. It is calculated as the difference between total population and urban population” (p. 722)
wdi_popurbagr	Urban Population Growth	World Bank’s World Development Index	“Urban population growth. Urban population refers to people living in urban areas as defined by national statistical offices. It is calculated using World Bank population estimates and urban ratios from the United Nations World Urbanization Prospects” (p. 723)
wdi_trade	Trade	World Bank’s World Development Index	“Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product” (p. 733)

Part B.4: Summary Statistic and Robustness Tests

Below are the tables of detailed descriptive statistics for all variables used in Chapter Three's primary analyses.

Table B.2: Summary Statistics

	Mean	Standard Dev.	Minimum	Maximum
Indigenous Speakers	1663044	2788066	0	1.58e+07
FDI inflows	13.972	18.924	-109.756	95.594
Ln Non-indigenous speakers	15.578	1.817	11.859	19.239
FDI outflows	2.123	4.259	-18.381	30.756
GDP per capita	0.542	0.338	0.109	1.482
Population	0.242	0.415	0.002	2.059
Colonial history	0.80	0.40	0	1
Cumulative interest rate	10.441	13.827	-57.007	100.980
Trade	69.414	39.878	15.056	241.024
Urban population growth	2.175	1.090	-1.079	4.543
Primary school	45.635	9.545	15.962	70.556
Rural population	35.336	16.970	4.957	73.589
Polity score	6.644	3.372	-8	10
Indig. H-index	0.453	0.317	0	1
Time trend	18.5	10.396	1	36

Below are the full tables of the robustness tests for Chapter Three. An interpretation of the results can be found in the body Chapter Three.

Table B.3: Linear Regression Models with Logged Dependent Variable

	Model 1	Model 2	Model 3	Model 4
FDI inflows	-0.026*** (0.007)	-0.045*** (0.011)	-0.038*** (0.012)	-0.034** (0.015)
Non-indigenous speakers	0.400*** (0.071)	0.631*** (0.107)	0.333** (0.163)	0.276* (0.166)
FDI outflows		0.168*** (0.039)	0.164*** (0.039)	0.027 (0.040)
GDP per capita		-5.390*** (0.495)	-6.469*** (0.517)	-3.645*** (0.782)
Population		0.931** (0.407)	3.379*** (0.670)	4.541*** (0.647)
Colonial history			0.676 (0.543)	2.632** (1.025)
Cumulative interest rate			-0.113*** (0.013)	-0.071*** (0.014)
Trade				0.000 (0.007)
Urban population growth				0.227 (0.213)
Primary school				-0.122*** (0.018)
Rural population				0.046* (0.024)
Polity score				-0.339*** (0.069)
Indig. H-index				3.965*** (0.531)
Time trend	0.038** (0.016)	0.048*** (0.016)	0.073*** (0.019)	0.034* (0.020)
Constant	5.578*** (1.131)	4.651*** (1.609)	9.190*** (2.199)	11.608*** (3.591)
Observations	609	509	389	345
R-squared	0.072	0.249	0.425	0.628
Log-likelihood	-1567	-1254	-930.0	-755.9

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1; Note: All independent variables correspond to lagged five-year moving averages aside from non-indigenous speakers, Indig. H-index, and colonialism.

Table B.4: Negative Binomial Count Regression Model with Non-Logged Control Variable

	Model 1	Model 2	Model 3	Model 4
FDI inflows	-0.021*** (0.006)	-0.035*** (0.007)	-0.026*** (0.005)	-0.030*** (0.008)
FDI outflows		0.040* (0.021)	-0.013 (0.019)	-0.006 (0.025)
GDP per capita		-3.157*** (0.338)	-2.507*** (0.371)	-3.397*** (0.522)
Population		1.971*** (0.305)	1.656*** (0.286)	3.080*** (0.430)
Non-indigenous speakers	-0.055 (2.139)	0.733 (2.321)	0.388 (2.359)	6.065*** (2.173)
Colonial history			2.822*** (0.230)	5.492*** (0.651)
Cumulative interest rate			0.006 (0.008)	0.000 (0.010)
Trade				0.006 (0.005)
Urban population growth				-0.456*** (0.173)
Primary school				-0.052*** (0.012)
Rural population				0.020 (0.016)
Polity score				-0.119** (0.050)
Indig. H-index				1.626*** (0.477)
Time trend	0.037*** (0.009)	0.044*** (0.009)	0.072*** (0.011)	0.014 (0.014)
Ln α	1.152*** (0.047)	0.980*** (0.052)	0.868*** (0.061)	0.735*** (0.066)
Constant	13.807*** (0.194)	14.838*** (0.234)	11.023*** (0.437)	12.371*** (1.234)
Observations	609	509	389	345
Log-likelihood	-8877	-7423	-5488	-4897

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1; Note: All independent variables correspond to lagged five-year moving averages aside from non-indigenous speakers, Indig. H-index, and colonialism

Table B.5: Negative Binomial Count Regression Model with Lagged Dependent Variable

	Model 1	Model 2	Model 3	Model 4
FDI inflows	-0.016*** (0.003)	-0.025*** (0.004)	-0.017*** (0.005)	-0.009 (0.007)
FDI outflows		0.033** (0.014)	0.016 (0.016)	0.007 (0.018)
GDP per capita		-0.572** (0.254)	-0.462 (0.302)	-1.247*** (0.461)
Population		-0.362* (0.185)	-0.121 (0.366)	1.706*** (0.487)
Non-indigenous speakers	0.161*** (0.031)	0.217*** (0.046)	0.232*** (0.083)	0.185* (0.099)
Colonial history			0.257 (0.317)	1.321* (0.747)
Cumulative interest rate			-0.003 (0.008)	-0.025** (0.010)
Trade				-0.003 (0.004)
Urban population growth				0.052 (0.147)
Primary school				-0.043*** (0.009)
Rural population				0.014 (0.015)
Polity				-0.162*** (0.049)
Indig. H-index				1.920*** (0.363)
Time trend	-0.005 (0.007)	-0.005 (0.008)	0.016 (0.010)	-0.009 (0.012)
Lagged indigenous speakers	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Ln α	0.497*** (0.051)	0.446*** (0.056)	0.479*** (0.064)	0.366*** (0.069)
Constant	9.945*** (0.503)	9.694*** (0.724)	8.390*** (1.135)	10.910*** (2.211)

Table B.5: Negative Binomial Count Regression Model with Lagged Dependent Variable
(Continued)

Observations	591	495	386	345
Log-likelihood	-8347	-7038	-5363	-4815

*Standard errors in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$*

Note: All independent variables correspond to lagged five-year moving averages aside from non-indigenous speakers, Indig. H-index, and colonialism

Table B.6: Poisson Count Regression Model

	Model 1	Model 2	Model 3	Model 4
FDI inflows	-0.012*** (0.000)	-0.028*** (0.000)	-0.020*** (0.000)	-0.020*** (0.000)
FDI outflows		-0.019*** (0.000)	-0.034*** (0.000)	-0.042*** (0.000)
GDP per capita		-2.310*** (0.000)	-2.700*** (0.000)	-3.318*** (0.000)
Population		0.538*** (0.000)	3.177*** (0.000)	3.935*** (0.000)
Non-indigenous speakers	0.109*** (0.000)	0.168*** (0.000)	-0.209*** (0.000)	-0.576*** (0.000)
Colonial history			5.538*** (0.000)	6.325*** (0.001)
Cumulative interest rate			0.031*** (0.000)	0.015*** (0.000)
Trade				-0.012*** (0.000)
Urban population growth				-0.380*** (0.000)
Primary school				-0.036*** (0.000)
Rural population				-0.006*** (0.000)
Polity score				-0.062*** (0.000)
Indig. H-index				0.296*** (0.000)
Time Trend	0.035*** (0.000)	0.043*** (0.000)	0.063*** (0.000)	0.058*** (0.000)
Constant	11.996*** (0.000)	12.228*** (0.000)	11.246*** (0.001)	20.483*** (0.002)
Observations	609	509	389	345
Log-likelihood	-9.600e+08	-6.640e+08	-2.570e+08	-1.880e+08

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1; Note: All independent variables correspond to lagged five-year moving averages aside from non-indigenous speakers, Indig. H-index, and colonialism

Table B.7: Negative Binomial Count Regression Model with English-language Control

	Model 1	Model 2	Model 3	Model 4
FDI inflows	-0.026*** (0.005)	-0.039*** (0.004)	-0.005 (0.003)	0.006** (0.003)
FDI outflows		-0.194*** (0.029)	-0.067*** (0.020)	-0.019 (0.013)
GDP per capita		-1.429*** (0.235)	0.738*** (0.186)	-0.277 (0.401)
Population		2.402*** (0.240)	3.374*** (0.151)	4.322*** (0.154)
Non-indigenous speakers	0.657*** (0.041)	0.416*** (0.048)	-0.010 (0.052)	0.010 (0.032)
Colonial history			1.112*** (0.211)	1.938*** (0.578)
Cumulative interest rate			0.030*** (0.007)	0.010** (0.004)
Trade				-0.000 (0.001)
Urban population growth				-0.314*** (0.077)
Primary school				0.005 (0.010)
Rural population				-0.008 (0.012)
Polity score				-0.029** (0.014)
Indig. H-index				1.441*** (0.120)
Time Trend	0.005 (0.007)	0.014** (0.007)	0.016*** (0.005)	-0.017*** (0.005)
English Speakers	-0.012 (0.050)	0.043 (0.035)	0.080*** (0.020)	0.024 (0.042)
Ln α	-0.093 (0.081)	-0.506*** (0.086)	-1.686*** (0.104)	-3.226*** (0.117)
Constant	3.164*** (0.689)	6.692*** (0.793)	9.001*** (0.618)	9.835*** (1.934)
Observations	243	229	175	145
Log-likelihood	-3446	-3206	-2254	-1798

Standard errors in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; Note: All independent variables correspond to lagged five-year moving averages aside from non-indigenous speakers, Indig. H-index, and colonialism.

Table B.8: Year Fixed Effects

	Model 1	Model 2	Model 3	Model 4
FDI inflows	-0.027*** (0.007)	-0.044*** (0.007)	-0.030*** (0.006)	-0.036*** (0.010)
FDI outflows		0.053*** (0.019)	-0.006 (0.019)	-0.015 (0.027)
GDP per capita		-3.777*** (0.316)	-2.592*** (0.401)	-3.216*** (0.563)
Population		1.031*** (0.335)	1.964*** (0.366)	3.411*** (0.451)
Non-indigenous speakers	0.148*** (0.043)	0.317*** (0.063)	-0.072 (0.094)	-0.027 (0.124)
Colonial history			2.957*** (0.339)	4.828*** (0.716)
Cumulative interest rate			-0.003 (0.009)	-0.010 (0.012)
Trade				0.005 (0.005)
Urban population growth				-0.353* (0.185)
Primary school				-0.055*** (0.013)
Rural population				0.012 (0.018)
Polity score				-0.094* (0.056)
Indig. H-index				1.627*** (0.606)
Ln α	1.135*** (0.047)	0.937*** (0.052)	0.824*** (0.061)	0.733*** (0.066)
Constant	12.622*** (0.809)	12.317*** (0.943)	14.682*** (1.192)	13.623*** (2.936)
Observations	609	509	389	345
Log-likelihood	-8870	-7408	-5476	-4897

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1; Note: All independent variables correspond to lagged five-year moving averages aside from non-indigenous speakers, Indig. H-index, and colonialism. Year fixed effects included in all models.

Table B.9: Negative Binomial Count Regression Model with Three-Year Moving Averages

	Model 1	Model 2	Model 3	Model 4
FDI inflows	-0.034*** (0.009)	-0.058*** (0.009)	-0.037*** (0.008)	-0.029** (0.012)
FDI outflows		0.065** (0.028)	-0.027 (0.026)	-0.019 (0.036)
GDP per capita		-36.483*** (2.938)	-24.688*** (3.375)	-30.352*** (4.817)
Population		0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Non-indigenous speakers	0.137*** (0.042)	0.318*** (0.061)	-0.050 (0.085)	0.059 (0.101)
Colonial history			2.963*** (0.304)	5.500*** (0.627)
Cumulative interest rate			0.000 (0.006)	-0.000 (0.009)
Trade				0.002 (0.005)
Urban population growth				-0.373** (0.169)
Primary school				-0.037*** (0.011)
Rural population				0.030** (0.015)
Polity				-0.141*** (0.052)
Indig. H-index				1.931*** (0.480)
Time trend	0.032*** (0.008)	0.047*** (0.009)	0.065*** (0.010)	0.020 (0.013)
Ln α	1.140*** (0.047)	0.972*** (0.051)	0.869*** (0.058)	0.768*** (0.064)
Constant	11.743*** (0.647)	10.315*** (0.869)	11.897*** (1.096)	10.170*** (2.219)
Observations	612	530	423	362
Log-likelihood	-8913	-7699	-5985	-5152

*Standard errors in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$*

Note: All independent variables correspond to lagged three-year moving averages aside from non-indigenous speakers, Indig. H-index, and colonialism.

Table B.10: Bilateral FDI from Spanish/Portuguese Source Countries

	Model 1	Model 2	Model 3	Model 4
FDI inflows	-0.034*** (0.009)	-0.058*** (0.009)	-0.037*** (0.008)	-0.029** (0.012)
FDI outflows		0.065** (0.028)	-0.027 (0.026)	-0.019 (0.036)
GDP per capita		-36.483*** (2.938)	-24.688*** (3.375)	-30.352*** (4.817)
Population		0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Non-indigenous speakers	0.137*** (0.042)	0.318*** (0.061)	-0.050 (0.085)	0.059 (0.101)
Colonial history			2.963*** (0.304)	5.500*** (0.627)
Cumulative interest rate			0.000 (0.006)	-0.000 (0.009)
Trade				0.002 (0.005)
Urban population growth				-0.373** (0.169)
Primary school				-0.037*** (0.011)
Rural population				0.030** (0.015)
Polity score				-0.141*** (0.052)
Indig. H-index				1.931*** (0.480)
Time trend	0.032*** (0.008)	0.047*** (0.009)	0.065*** (0.010)	0.020 (0.013)
Ln α	1.140*** (0.047)	0.972*** (0.051)	0.869*** (0.058)	0.768*** (0.064)
Constant	11.743*** (0.647)	10.315*** (0.869)	11.897*** (1.096)	10.170*** (2.219)
Observations	612	530	423	362
Log-likelihood	-8913	-7699	-5985	-5152

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Note: All independent variables correspond to lagged five-year moving averages aside from non-indigenous speakers, Indig. H-index, and colonialism

Table B.11: Bilateral FDI from Non-Spanish/Portuguese Source Countries

	Model 1	Model 2	Model 3	Model 4
FDI inflows	-32.633*** (4.094)	-26.486*** (4.558)	-11.604*** (4.212)	-2.183 (9.236)
FDI outflows		-0.069*** (0.012)	-0.075*** (0.011)	-0.053*** (0.011)
GDP per capita		-3.034*** (0.199)	-2.867*** (0.221)	-4.259*** (0.264)
Population		0.000*** (0.000)	0.000*** (0.000)	0.001*** (0.000)
Non-indigenous speakers	0.044* (0.025)	0.279*** (0.041)	-0.033 (0.042)	0.219*** (0.063)
Colonial history			3.571*** (0.160)	7.841*** (0.255)
Cumulative interest rate			-0.014*** (0.005)	0.002 (0.006)
Trade				-0.011*** (0.002)
Urban Population Growth				0.084 (0.068)
Primary School				-0.081*** (0.006)
Rural population				0.123*** (0.008)
Polity score				-0.936*** (0.040)
Indig. H-Index				9.010*** (0.288)
Time Trend	0.102*** (0.022)	0.170*** (0.021)	0.201*** (0.020)	0.187*** (0.020)
Ln α	1.180*** (0.028)	0.993*** (0.029)	0.774*** (0.031)	0.291*** (0.034)
Constant	11.121*** (0.756)	6.912*** (0.819)	7.277*** (0.775)	3.058 (1.918)
Observations	1,767	1,663	1,508	1,451
Log-likelihood	-26217	-24262	-21791	-20604

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Note: All independent variables correspond to lagged five-year moving averages aside from non-indigenous speakers, Indig. H-index, and colonialis

Appendix C

SUPPLEMENTAL MATERIALS FOR CHAPTER FOUR

Table C.1: Summary Statistics (Main Variables)

	Observations	Mean	Standard Deviation	Minimum	Maximum
Government Response	5,740	-0.006	3.544	-17.400	17.000
Protest Intensity	5,740	0.001	5.457	-104	150
Geographic Protest Intensity	5,740	0.001	1.252	-13	19
Indigenous H-Index	5,740	0.546	0.313	0	1
Gov-International Goldstein	5,740	0.005	2.010	-13.000	11.800
National Lang. Speakers	5,760	0.027	0.050	0.001	0.227
Indigenous Lang. Speakers	5,760	17.955	30.318	0	157.819
Polity	5,244	7.524	2.016	-3	10
FDI	5,472	3.724	3.460	-16.589	16.229
GDP Per Capita Growth	5,484	1.998	3.256	-11.877	16.226
Log GDP Per Capita	5,484	-3.021	0.669	-4.494	-1.893
Log Population	5,520	15.973	1.628	12.240	19.159
Rural Population Percentage	5,520	33.136	16.847	4.760	73.600

Table C.2: Country-Month Linear Models of Government Protest Response for Latin America, 1995-2018, Controlling for Year Fixed Effects

	Model 1 OLS	Model 2 RE	Model 3 FE	Model 4 OLS	Model 5 RE	Model 6 FE
Protest Intensity	-0.186*** (0.047)	-0.186*** (0.047)	-0.186*** (0.047)	-0.216*** (0.040)	-0.216*** (0.040)	-0.216*** (0.040)
Indigenous H-index (Reversed)	-0.011 (0.014)	-0.013 (0.076)	-0.011 (0.014)	-0.010 (0.020)	-0.008 (0.075)	-0.010 (0.020)
ProtestXHindex (Reversed)	0.172*** (0.045)	0.172*** (0.045)	0.172*** (0.045)	0.191*** (0.042)	0.191*** (0.042)	0.191*** (0.042)
Gov-International (Goldstein)	0.053* (0.026)	0.053* (0.026)	0.053** (0.026)	0.050* (0.027)	0.050* (0.027)	0.050* (0.027)
National Lang. Speakers	0.083 (0.079)	-0.582** (0.245)	0.083 (0.079)	0.073 (0.131)	-0.607* (0.332)	0.073 (0.131)
Indigenous Lang. Speakers	0.000* (0.000)	0.001 (0.001)	0.000* (0.000)	0.000 (0.000)	0.001 (0.001)	0.000 (0.000)
Polity	-0.002 (0.002)	0.001 (0.009)	-0.002 (0.002)	0.002 (0.003)	0.003 (0.010)	0.002 (0.003)
FDI				-0.003 (0.003)	-0.007 (0.005)	-0.003 (0.003)
GDP Per Cap Growth				-0.004 (0.006)	-0.005 (0.006)	-0.004 (0.006)
Ln GDP Per Capita				0.010 (0.012)	0.031 (0.128)	0.010 (0.012)
Ln Population				-0.004 (0.006)	-0.094 (0.170)	-0.004 (0.006)
Rural Population Percentage				0.000 (0.001)	-0.003 (0.003)	0.000 (0.001)
Observations	5,225	5,225	5,225	5,177	5,177	5,177
Root Mean Square Error	3.577	3.577	3.577	3.586	3.586	3.586

Robust standard errors in parentheses; Year fixed effects included though not reported here.

*** p<0.01, ** p<0.05, * p<0.1

Table C.3: Country-Month Linear Models of Government Protest Response for Latin America, 1995-2018, Controlling for Month Fixed Effects

	Model 1 OLS	Model 2 RE	Model 3 FE	Model 4 OLS	Model 5 RE	Model 6 FE
Protest Intensity	-0.185*** (0.048)	-0.185*** (0.048)	-0.185*** (0.048)	-0.216*** (0.041)	-0.216*** (0.041)	-0.216*** (0.041)
Indigenous H-index (Reversed)	-0.013 (0.014)	-0.021 (0.066)	-0.013 (0.014)	-0.013 (0.017)	-0.011 (0.068)	-0.013 (0.017)
ProtestXHindex (Reversed)	0.170*** (0.046)	0.170*** (0.046)	0.170*** (0.046)	0.189*** (0.043)	0.189*** (0.043)	0.189*** (0.043)
Gov-International (Goldstein)	0.052* (0.026)	0.052* (0.026)	0.052** (0.026)	0.049* (0.027)	0.049* (0.027)	0.049* (0.027)
National Lang. Speakers	0.108 (0.069)	-0.396* (0.218)	0.108 (0.069)	0.124 (0.114)	-0.375 (0.268)	0.124 (0.114)
Indigenous Lang. Speakers	0.000* (0.000)	0.001 (0.001)	0.000* (0.000)	0.000* (0.000)	0.001 (0.001)	0.000** (0.000)
Polity	-0.002 (0.002)	0.001 (0.007)	-0.002 (0.002)	0.000 (0.003)	0.001 (0.007)	0.000 (0.003)
FDI				0.000 (0.003)	-0.002 (0.005)	0.000 (0.003)
GDP Per Capita Growth				-0.003 (0.005)	-0.003 (0.005)	-0.003 (0.005)
Ln GDP Per Capita				0.012 (0.009)	0.047 (0.069)	0.012 (0.009)
Ln Population				-0.005 (0.005)	-0.128 (0.178)	-0.005 (0.005)
Rural Population Percentage				0.000 (0.000)	-0.003 (0.002)	0.000 (0.000)
Observations	5,225	5,225	5,225	5,177	5,177	5,177
Root Mean Square Error	3.572	3.572	3.572	3.581	3.580	3.581

Robust standard errors in parentheses; Month fixed effects included though not reported here.

*** p<0.01, ** p<0.05, * p<0.1

Table C.4: Country-Month Linear Models of Government Protest Response for Latin America, 1995-2018, Using Logged Indigenous and National Language Speaker Controls

	Model 1 OLS	Model 2 RE	Model 3 FE	Model 4 OLS	Model 5 RE	Model 6 FE
Protest Intensity	-0.185*** (0.047)	-0.185*** (0.047)	-0.185*** (0.047)	-0.216*** (0.041)	-0.216*** (0.041)	-0.216*** (0.041)
Indigenous H-index (Reversed)	-0.004 (0.015)	0.147* (0.077)	-0.004 (0.015)	-0.001 (0.019)	0.148 (0.103)	-0.001 (0.019)
ProtestXHindex (Reversed)	0.171*** (0.045)	0.171*** (0.045)	0.171*** (0.045)	0.190*** (0.043)	0.190*** (0.043)	0.190*** (0.043)
Gov-International (Goldstein)	0.053* (0.026)	0.053* (0.026)	0.053** (0.026)	0.050* (0.027)	0.050* (0.027)	0.050* (0.027)
Ln Indigenous Lang. Speakers	0.000 (0.001)	0.033*** (0.010)	0.000 (0.001)	0.002 (0.002)	0.031** (0.014)	0.002 (0.002)
Ln National Lang. Speakers	0.001 (0.003)	-0.032 (0.031)	0.001 (0.003)	-0.002 (0.010)	-0.032 (0.033)	-0.002 (0.010)
Polity	-0.001 (0.003)	0.004 (0.006)	-0.001 (0.003)	0.001 (0.003)	0.006 (0.007)	0.001 (0.003)
FDI				-0.000 (0.003)	-0.002 (0.005)	-0.000 (0.003)
GDP Per Capita Growth				-0.003 (0.004)	-0.003 (0.005)	-0.003 (0.004)
Ln GDP Per Capita				0.010 (0.009)	0.049 (0.071)	0.010 (0.009)
Ln Population				-0.002 (0.013)	-0.041 (0.175)	-0.002 (0.013)
Rural Population Percentage				-0.000 (0.001)	0.000 (0.002)	-0.000 (0.001)
Constant	-0.008 (0.030)	-0.023 (0.426)	-0.008 (0.030)	0.073 (0.086)	0.796 (3.107)	0.073 (0.086)
Observations	5,225	5,225	5,225	5,177	5,177	5,177
Root Mean Square Error	3.571	3.571	3.571	3.580	3.580	3.580

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table C.5: Country-Month Linear Models of Government Protest Response for Latin America, 1995-2018, Using Geographic Protest Intensity as Opposed to Protest Intensity

	Model 1 OLS	Model 2 RE	Model 3 FE	Model 4 OLS	Model 5 RE	Model 6 FE
Geographic Protest Intensity	-0.823*** (0.137)	-0.823*** (0.137)	-0.823*** (0.137)	-0.852*** (0.142)	-0.852*** (0.142)	-0.852*** (0.142)
Indigenous H-index (Reversed)	-0.012 (0.014)	-0.026 (0.064)	-0.012 (0.014)	-0.012 (0.017)	-0.020 (0.069)	-0.012 (0.017)
Geo-ProtestXHindex (Reversed)	0.714*** (0.167)	0.714*** (0.167)	0.714*** (0.167)	0.731*** (0.179)	0.731*** (0.178)	0.731*** (0.179)
Gov-International (Goldstein)	0.056** (0.026)	0.056** (0.026)	0.056** (0.026)	0.055* (0.027)	0.055* (0.027)	0.055** (0.027)
National Lang. Speakers	0.084 (0.079)	-0.544** (0.214)	0.084 (0.079)	0.094 (0.131)	-0.540* (0.266)	0.094 (0.131)
Indigenous Lang. Speakers	0.000 (0.000)	0.001 (0.001)	0.000 (0.000)	0.000* (0.000)	0.001 (0.001)	0.000* (0.000)
Polity	-0.002 (0.002)	0.002 (0.007)	-0.002 (0.002)	-0.000 (0.003)	0.002 (0.008)	-0.000 (0.003)
FDI				0.000 (0.003)	-0.001 (0.005)	0.000 (0.003)
GDP Per Capita Growth				-0.004 (0.004)	-0.004 (0.005)	-0.004 (0.004)
Ln GDP Per Capita				0.010 (0.009)	0.016 (0.064)	0.010 (0.009)
Ln Population				-0.005 (0.005)	-0.097 (0.168)	-0.005 (0.005)
Rural Population Percentage				-0.000 (0.000)	-0.003 (0.002)	-0.000 (0.000)
Constant	0.009 (0.018)	-0.011 (0.056)	0.009 (0.018)	0.115 (0.081)	1.695 (2.872)	0.115 (0.081)
Observations	5,225	5,225	5,225	5,177	5,177	5,177
Root Mean Square Error	3.566	3.566	3.566	3.578	3.578	3.578

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table C.6: Country-Month Linear Models of Government Protest Response for Latin America, 1995-2018, Using Protest Attention as Opposed to Protest Intensity

	Model 1 OLS	Model 2 RE	Model 3 FE	Model 4 OLS	Model 5 RE	Model 6 FE
Protest Attention	-0.131*** (0.029)	-0.131*** (0.029)	-0.131*** (0.029)	-0.143*** (0.029)	-0.143*** (0.029)	-0.143*** (0.029)
Indigenous H-index (Reversed)	-0.013 (0.014)	-0.020 (0.067)	-0.013 (0.014)	-0.013 (0.018)	-0.008 (0.069)	-0.013 (0.018)
ProtestAttXHindex (Reversed)	0.116*** (0.029)	0.116*** (0.029)	0.116*** (0.029)	0.122*** (0.032)	0.122*** (0.032)	0.122*** (0.032)
Gov-International (Goldstein)	0.054* (0.026)	0.054* (0.026)	0.054** (0.026)	0.052* (0.027)	0.052* (0.027)	0.052* (0.027)
National Lang. Speakers	0.108 (0.069)	-0.396* (0.219)	0.108 (0.069)	0.126 (0.115)	-0.378 (0.273)	0.126 (0.115)
Indigenous Lang. Speakers	0.000* (0.000)	0.001 (0.001)	0.000* (0.000)	0.000* (0.000)	0.001 (0.001)	0.000** (0.000)
Polity	-0.001 (0.002)	0.001 (0.007)	-0.001 (0.002)	0.000 (0.003)	0.001 (0.008)	0.000 (0.003)
FDI				0.000 (0.003)	-0.002 (0.005)	0.000 (0.003)
GDP Per Capita Growth				-0.003 (0.005)	-0.003 (0.005)	-0.003 (0.005)
Ln GDP Per Capita				0.013 (0.009)	0.049 (0.068)	0.013 (0.009)
Ln Population				-0.006 (0.005)	-0.137 (0.175)	-0.006 (0.005)
Rural Population Percentage				0.000 (0.000)	-0.003 (0.002)	0.000 (0.000)
Constant	0.007 (0.018)	-0.011 (0.053)	0.007 (0.018)	0.122 (0.082)	2.440 (3.010)	0.122 (0.082)
Observations	5,225	5,225	5,225	5,177	5,177	5,177
Root Mean Square Error	3.572	3.572	3.572	3.583	3.583	3.583

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table C.7: Country-Month Linear Models of Government Protest Response for Latin America, 1995-2018, Excluding Uruguay

	Model 1 OLS	Model 2 RE	Model 3 FE	Model 4 OLS	Model 5 RE	Model 6 FE
Protest Intensity	-0.185*** (0.047)	-0.185*** (0.047)	-0.185*** (0.047)	-0.215*** (0.041)	-0.215*** (0.041)	-0.215*** (0.041)
Indigenous H-index (Reversed)	-0.006 (0.015)	0.085 (0.058)	-0.006 (0.015)	0.004 (0.026)	0.091 (0.081)	0.004 (0.026)
ProtestXHindex (Reversed)	0.171*** (0.045)	0.171*** (0.046)	0.171*** (0.045)	0.189*** (0.043)	0.189*** (0.043)	0.189*** (0.043)
Gov-International (Goldstein)	0.058** (0.026)	0.058** (0.026)	0.058** (0.026)	0.055* (0.027)	0.055* (0.027)	0.055** (0.027)
National Lang. Speakers	0.100 (0.070)	-0.348 (0.202)	0.100 (0.070)	0.110 (0.113)	-0.312 (0.257)	0.110 (0.113)
Indigenous Lang. Speakers	0.000 (0.000)	0.001** (0.001)	0.000* (0.000)	0.000* (0.000)	0.001* (0.001)	0.000* (0.000)
Polity	-0.002 (0.002)	0.000 (0.007)	-0.002 (0.002)	0.001 (0.003)	0.001 (0.007)	0.001 (0.003)
FDI				-0.001 (0.003)	-0.003 (0.005)	-0.001 (0.003)
GDP Per Cap Growth				-0.003 (0.005)	-0.004 (0.005)	-0.003 (0.005)
Ln GDP Per Capita				0.008 (0.012)	0.040 (0.081)	0.008 (0.012)
Ln Population				-0.007 (0.008)	-0.135 (0.187)	-0.007 (0.008)
Rural Population Percentage				-0.000 (0.001)	-0.002 (0.002)	-0.000 (0.001)
Observations	4,950	4,950	4,950	4,902	4,902	4,902
Root Mean Square Error	3.581	3.581	3.581	3.590	3.590	3.590

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table C.8: Country-Month Linear Models of Government Protest Response for Latin America, 1995-2018, With Alternate Democracy Control

	Model 1 OLS	Model 2 RE	Model 3 FE	Model 4 OLS	Model 5 RE	Model 6 FE
Protest Intensity	-0.181*** (0.043)	-0.181*** (0.043)	-0.181*** (0.043)	-0.216*** (0.041)	-0.216*** (0.041)	-0.216*** (0.041)
Indigenous H-index (Reversed)	-0.001 (0.014)	0.020 (0.059)	-0.001 (0.014)	-0.014 (0.017)	-0.010 (0.069)	-0.014 (0.017)
ProtestXHindex (Reversed)	0.165*** (0.042)	0.165*** (0.042)	0.165*** (0.042)	0.190*** (0.043)	0.190*** (0.043)	0.190*** (0.043)
Gov-International Goldstein	0.047* (0.026)	0.047* (0.026)	0.047* (0.026)	0.050* (0.027)	0.050* (0.027)	0.050* (0.027)
National Lang. Speakers	0.098** (0.047)	-0.245 (0.174)	0.098** (0.047)	0.130 (0.101)	-0.362*** (0.110)	0.130 (0.101)
Indigenous Lang. Speakers	0.000 (0.000)	0.001 (0.001)	0.000 (0.000)	0.000* (0.000)	0.001 (0.001)	0.000** (0.000)
V-Dem EDI	0.047 (0.028)	0.174 (0.168)	0.047* (0.028)	0.026 (0.035)	0.020 (0.130)	0.026 (0.035)
FDI				0.000 (0.003)	-0.002 (0.005)	0.000 (0.003)
GDP Per Cap Growth				-0.003 (0.005)	-0.003 (0.005)	-0.003 (0.005)
Ln GDP Per Cap				0.010 (0.009)	0.047 (0.065)	0.010 (0.009)
Ln Population				-0.005 (0.005)	-0.128 (0.148)	-0.005 (0.005)
Rural Population Percentage				0.000 (0.000)	-0.003 (0.002)	0.000 (0.000)
Constant	-0.041* (0.022)	-0.141 (0.122)	-0.041* (0.022)	0.082 (0.091)	2.270 (2.521)	0.082 (0.091)
Observations	5,453	5,453	5,453	5,177	5,177	5,177
Root Mean Square Error	3.564	3.564	3.564	3.580	3.580	3.580

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Appendix D

PERMISSIONS

Note: As outlined in the publishing agreement inserted below, I have permission to utilize portions of my forthcoming article (Ellington 2021) in this dissertation, provided that I include the following acknowledgement here: This Dissertation is derived in part from an article published in *Review of International Political Economy*, Forthcoming, published online 07/26/2021, Copyright Taylor & Francis, available online: <https://doi.org/10.1080/09692290.2021.1948891>



PUBLISHING AGREEMENT

This is an agreement under which you, the author, assign copyright in your article to Informa UK Limited registered in England under no. 1072954 trading as Taylor & Francis Group, Registered Office: 5 Howick Place, London, SW1P 1 WG (hereinafter 'Taylor & Francis') to allow us to publish your article, including abstract, tables, figures, data, and supplemental material hosted by us, as the Version of Record (VoR) in the Journal for the full period of copyright throughout the world, in all forms and all media, subject to the Terms & Conditions below.

Article (the "Article") entitled:	Moribund: Exploring the Relationship between Foreign Direct Investment and Indigenous Language Erosion in Latin America
Article DOI:	10.1080/09692290.2021.1948891
Author(s):	Sarah Ellington
To publish in the Journal:	Review of International Political Economy
Journal ISSN:	1466-4526

STATEMENT OF ORIGINAL COPYRIGHT OWNERSHIP / CONDITIONS

In consideration of the publication of the Article, you hereby grant with full title guarantee all rights of copyright and related rights in the above specified Article as the Version of Scholarly Record which is intended for publication in all forms and all media (whether known at this time or developed at any time in the future) throughout the world, in all languages, for the full term of copyright, to take effect if and when the Article is accepted for publication in the Journal.

ASSIGNMENT OF PUBLISHING RIGHTS

I hereby assign Taylor & Francis with full title guarantee all rights of copyright and related publishing rights in my article, in all forms and all media (whether known at this time or developed at any time in the future) throughout the world, in all languages, where our rights include but are not limited to the right to translate, create adaptations, extracts, or derivative works and to sub-license such rights, for the full term of copyright (including all renewals and extensions of that term), to take effect if and when the article is accepted for publication. If a statement of government or corporate ownership appears above, that statement modifies this assignment as described.

I confirm that I have read and accept the full Terms & Conditions below including my author warranties, and have read and agree to comply with the Journal's policies on peer review and publishing ethics.

Signed and dated:

Sarah Ellington, 25 June 2021 15:09 (UTC Europe/London)

Taylor & Francis, 25 June 2021 15:09 (UTC Europe/London)

THIS FORM WILL BE RETAINED BY THE PUBLISHER.

ASSIGNMENT OF COPYRIGHT: TERMS & CONDITIONS

DEFINITION

1. Your article is defined as comprising (a) your Accepted Manuscript (AM) in its final form; (b) the final, definitive, and citable Version of Record (VoR) including the abstract, text, bibliography, and all accompanying tables, illustrations, data, and media; and (c) any supplemental material hosted by Taylor & Francis. This assignment and these Terms & Conditions constitute the entire agreement and the sole understanding between you and us ('agreement'); no amendment, addendum, or other communication will be taken into account when interpreting your and our rights and obligations under this agreement, unless amended by a written document signed by both of us.

TAYLOR & FRANCIS' RESPONSIBILITIES

2. If deemed acceptable by the Editors of the Journal, we shall prepare and publish your article in the Journal. We may post your accepted manuscript in advance of the formal publication of the VoR. We reserve the right to make such editorial changes as may be necessary to make the article suitable for publication, or as we reasonably consider necessary to avoid infringing third-party rights or breaching any laws; and we reserve the right not to proceed with publication for whatever reason.
3. Taylor & Francis will deposit your Accepted Manuscript (AM) to any designated institutional repository including PubMedCentral (PMC) with which Taylor & Francis has an article deposit agreement; see 4 iv (a) below.

RIGHTS RETAINED BY YOU AS AUTHOR

4. These rights are personal to you, and your co-authors, and cannot be transferred by you to anyone else. Without prejudice to your rights as author set out below, you undertake that the fully reference-linked Version of Record (VOR) will not be published elsewhere without our prior written consent. You assert and retain the following rights as author(s):
 - i. The right to be identified as the author of your article, whenever and wherever the article is published, such rights including moral rights arising under § 77, Copyright, Designs & Patents Act 1988, and, so far as is legally possible, any corresponding rights we may have in any territory of the world.
 - ii. The right to retain patent rights, trademark rights, or rights to any process, product or procedure described in your article.
 - iii. The right to post and maintain at any time the Author's Original Manuscript (AOM; your manuscript in its original and unrefereed form; a 'preprint').
 - iv. The right to post at any time after publication of the VoR your AM (your manuscript in its revised after peer review and accepted for publication form; a 'postprint') as a digital file on your own personal or departmental website, provided that you do not use the VoR published by us, and that you include any amendments or deletions or warnings relating to the article issued or published by us; and with the acknowledgement: 'The Version of Record of this manuscript has been published and is available in <JOURNAL TITLE> <date of publication> <http://www.tandfonline.com/<Article DOI>>.'
 - a. Please note that embargoes apply with respect to posting the AM to an institutional or subject repository. For further information, please [see our list of journals with applicable embargo periods](#). For the avoidance of doubt, you are not permitted to post the final published paper, the VoR published by us, to any site, unless it has been published as Open Access on our website.
 - b. If, following publication, you or your funder pay an Article Publishing Charge for retrospective Open Access publication, you may then opt for one of three licenses: CC BY, CC BY-NC, or CC BY-NC-ND; if you do not respond, we shall assign a CC BY license. All rights in the article will revert to you as author.
 - v. The right to share with colleagues copies of the article in its published form as supplied to you by Taylor & Francis as a digital eprint or printed reprint on a non-commercial basis.
 - vi. The right to make printed copies of all or part of the article on a non-commercial basis for use by you for lecture or classroom purposes provided that such copies are not offered for sale or distributed in any systematic way, and provided that acknowledgement to prior publication in the Journal is given.
 - vii. The right, if the article has been produced within the scope of your employment, for your employer to use all or part of the article internally within the institution or company on a non-commercial basis provided that acknowledgement to prior publication in the Journal is given.
 - viii. The right to include the article in a thesis or dissertation that is not to be published commercially, provided that acknowledgement to prior publication in the Journal is given.
 - ix. The right to present the article at a meeting or conference and to distribute printed copies of the article to the delegates attending the meeting provided that this is not for commercial purposes and provided that acknowledgement to prior publication in the Journal is given.
 - x. The right to use the article in its published form in whole or in part without revision or modification in personal compilations, or other publications of your own work, provided that acknowledgement to prior publication in the Journal is given.
 - xi. The right to expand your article into book-length form for publication provided that acknowledgement to prior publication in the Journal is made explicit (see below). Where permission is sought to re-use an article in a book chapter or edited collection on a commercial basis a fee will be due, payable by the publisher of the new work. Where you as the author of the article have had the lead role in the new work (i.e., you are the author of the new work or the editor of the edited collection), fees will be waived. Acknowledgement to prior publication in the Journal should be made explicit (see below):

Acknowledgement: This <chapter or book> is derived in part from an article published in <JOURNAL TITLE> <date of publication> <copyright Taylor & Francis>, available online: <http://www.tandfonline.com/<Article DOI>>

If you wish to use your article in a way that is not permitted by this agreement, please contact permissionrequest@tandf.co.uk

WARRANTIES MADE BY YOU AS AUTHOR

5. You warrant that:
 - i. All persons who have a reasonable claim to authorship are named in the article as co-authors including yourself, and you have not

fabricated or misappropriated anyone's identity, including your own.

ii. You have been authorized by all such co-authors to sign this agreement as agent on their behalf, and to agree on their behalf the priority of the assertion of copyright and the order of names in the publication of the article.

iii. The article is your original work, apart from any permitted third-party copyright material you include, and does not infringe any intellectual property rights of any other person or entity and cannot be construed as plagiarizing any other published work, including your own published work.

iv. The article is not currently under submission to, nor is under consideration by, nor has been accepted by any other journal or publication, nor has been previously published by any other journal or publication, nor has been assigned or licensed by you to any third party.

v. The article contains no content that is abusive, defamatory, libelous, obscene, fraudulent, nor in any way infringes the rights of others, nor is in any other way unlawful or in violation of applicable laws.

vi. Research reported in the article has been conducted in an ethical and responsible manner, in full compliance with all relevant codes of experimentation and legislation. All articles which report in vivo experiments or clinical trials on humans or animals must include a written statement in the Methods section that such work was conducted with the formal approval of the local human subject or animal care committees, and that clinical trials have been registered as applicable legislation requires.

vii. Any patient, service user, or participant (or that person's parent or legal guardian) in any research or clinical experiment or study who is described in the article has given written consent to the inclusion of material, text or image, pertaining to themselves, and that they acknowledge that they cannot be identified via the article and that you have anonymized them and that you do not identify them in any way. Where such a person is deceased, you warrant you have obtained the written consent of the deceased person's family or estate.

viii. You have complied with all mandatory laboratory health and safety procedures in the course of conducting any experimental work reported in your article; your article contains all appropriate warnings concerning any specific and particular hazards that may be involved in carrying out experiments or procedures described in the article or involved in instructions, materials, or formulae in the article; your article includes explicitly relevant safety precautions; and cites, if an accepted Standard or Code of Practice is relevant, a reference to the relevant Standard or Code.

ix. You have acknowledged all sources of research funding, as required by your research funder, and disclosed any financial interest or benefit you have arising from the direct applications of your research.

x. You have obtained the necessary written permission to include material in your article that is owned and held in copyright by a third party, which shall include but is not limited to any proprietary text, illustration, table, or other material, including data, audio, video, film stills, screenshots, musical notation and any supplemental material.

xi. You have read and complied with our policy on publishing ethics.

xii. You have read and complied with the Journal's Instructions for Authors.

xiii. You have read and complied with our guide on peer review.

xiv. You will keep us and our affiliates indemnified in full against all loss, damages, injury, costs and expenses (including legal and other professional fees and expenses) awarded against or incurred or paid by us as a result of your breach of the warranties given in this agreement.

xv. You consent to allowing us to use your article for marketing and promotional purposes.

GOVERNING LAW

6. This agreement (and any dispute, proceeding, claim or controversy in relation to it) is subject to English law and the parties hereby submit to the exclusive jurisdiction of the Courts of England and Wales.