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Agro Sí, Mina No: Explaining the Onset of Protest Surrounding Mining Projects in Peru

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MACALESTER COLLEGE

HONORS THESIS

Agro Sí, Mina No:
**Explaining the Onset of Protest
Surrounding Mining Projects in Peru**

Jhader Aguad

supervised by

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Political Science Department*

April 26, 2017

Abstract

Over the past decade, Peru has witnessed a steady increase in protest activity, often related to natural resource extraction. From 2006 to 2016, the number of protest events rose from 73 to over 200 per month. Yet this increase was far more prevalent in some provinces than others. What explains variation in protest surrounding mining projects in Peru? Although scholarly work on protest is extensive, studies on Peru remain limited and focus on the grievances of social actors and the political conditions that allow mobilization. However, after conducting an exploratory study in the agricultural area of the Tambo Valley, I encountered the possible friction between mining activities and agriculture. I examine the interaction between agricultural importance and a mining company's announcement as a determinant of variation in protest across Peruvian provinces between 2011 and 2015. I hypothesize that a mining company's announcement of the creation or advancement of a mining project in Peru has a greater effect on the likelihood of protest, if the mining project is in a mostly agricultural province. In a context in which protests are widespread, this project will add nuance to the current debate between economic growth and extractive practices in mining countries like Peru.

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List of Abbreviations

AIDSESEP	Interethnic Association for the Development of the Peruvian Rainforest
APRA	American Popular Revolutionary Alliance
BCRP	Central Reserve Bank of Peru
CONACAMI	National Confederation of Peruvian Communities Affected by Mining
CPCC	Cerro de Pasco Copper Corporation
CSE	Clustered Standard Errors
CSR	Corporate Social Responsibility
DV	Dependent Variable
EAP	Economically Active Population
EIA	Environmental Impact Assessment
EU	European Union
FADVDT	Tambo Valley Defense Front
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
GRUFIDES	Training and Intervention Group of Sustainable Development
ILO	International Labor Organization
IMF	International Monetary Fund
INEI	National Institute of Statistics and Informatics
IRB	Institutional Review Board
IV	Independent Variable

MEF	Ministry of Economy and Finance of Peru
MINAGRI	Ministry of Agriculture and Irrigation of Peru
MINEM	Ministry of Energy and Mines of Peru
MRE	Ministry of Foreign Affairs of Peru
MRTA	Tupac Amaru Revolutionary Movement
MTL	Land and Freedom Movement Peru
NGO	Non-governmental Organization
OCMAL	Observatory of Conflict Minerals in Latin America
OLS	Ordinary Least Squares
OVB	Omitted-variable Bias
PAP	Pre-Analysis Plan
PEN	Peruvian Sol
SCU	Social Conflict Unit
SPCC	Southern Peru Copper Corporation
UN	United Nations
UNDP	United Nations Development Program
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
UNOPS	United Nations Office for Project Services
USAID	United States Agency for International Development
USD	United States Dollar

Chapter 1

Introduction

Protests are common in a country like Peru. In April 2015, protests occurred in my hometown, Arequipa, in the wake of the Tía María mining project. The Peruvian government declared a state of emergency following violent protests and four people died amidst confrontations between the local communities and the police. I witnessed blocking of roads, destruction of private property, looting, and attacks on both private and public transportation in my city during an entire week. The slogan of the protests was “*Agro Sí, Mina No*” (Agriculture yes, Mining not), displayed in green flags across towns and districts in opposition to the mining project. These kind of protests in the wake of mining projects have happened only a few times in Peru, and not across every province that has a mining project.

Peru has witnessed a steady increase in protest activity over the last decade, often related to natural resource extraction, including minerals, gas, and oil. From 2006 to 2016, the number of protest events rose from 73 to over 216 per month (Defensoria del Pueblo, 2016). Yet this increase was far more prevalent in certain provinces than it was in others. For instance, while protests occurred surrounding some mining projects, such as Tambogrande in the province of Piura, they did not occur in others, such as Antamina in the province of Huari. I propose in this research project a plausible explanation for the variation in protest activity in Peru. Therefore, the puzzle

I aim to solve is that some mining projects are associated with the onset of protest, while some others are not.

The graph in Figure 1.1 plots protest frequency in Peru from January 2006 to October 2016. Data on protest also come from the *Annual Report on Social Conflict*, from the Peruvian Ombudsman's Office. Data include monthly reports for ten consecutive years. September 2009 was the month with the highest number of protests across the national territory, registering 288 protest events (Defensoria del Pueblo, 2016). This period corresponds to the second government of Alan García (2006-2011). Although García aimed to control social conflicts surrounding mining projects with the creation of the Social Conflict Unit (SCU), which is responsible for conflict monitoring and mediation within the Ombudsman's Office, the graph shows that protest activity actually intensified during his administration. The graph also shows that the frequency of protest decreased at the end of García's administration in July 2011, as the incoming government of Ollanta Humala (2011-2016) promised to tackle the country's biggest social issues.

Alan García and his APRA party continued the neoliberal economic models adopted by his predecessors, Alberto Fujimori (1990-2001) and Alejandro Toledo (2001-2006). García strongly believed in a free-market economy that welcomes foreign investment, especially focused on the extraction of Peru's natural resources. Li (2015) describes that García believed that modern mining represents a departure from the polluting practices of old mining, and that extractive activities were the solution to make Peru's land productive. He often disagreed with protesters, and has even gone so far as to describe their mobilizations as "savage and barbaric," and portrayed indigenous protesters as "second class citizens" (Li, 2015). President García disregarded the claims of protesters by referring to them as "a past ideology, idleness, and laziness" (Arce, 2014). García's economic policies and a discriminatory attitude against indigenous communities seemingly accounted for an increase in protest events across the national territory.

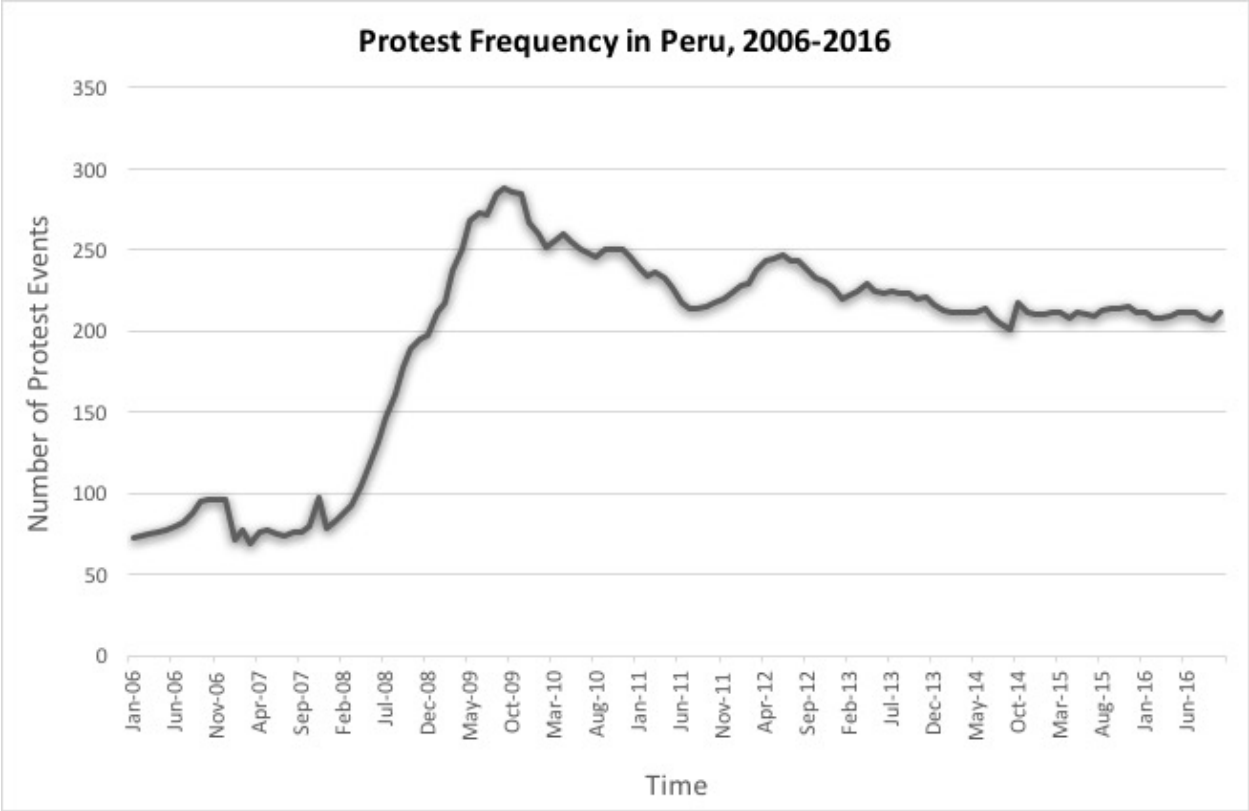


Figure 1.1: Protest Frequency in Peru, 2006-2016

Source: Data from the Peruvian Ombudsman’s Office, downloaded on October 30, 2016. Cumulative frequency distribution of protest covers a ten-year period (2006-2016) and includes 195 provinces in Peru. Data include observations of all types of protest activity.

The map in Figure 1.2 plots the cumulative frequency distribution of the number of protest events that occurred across 195 Peruvian provinces over the course of five years, between 2011 and 2015. Data come from the *Annual Report on Social Conflict*, a monthly report produced by the Peruvian Ombudsman’s Office, which monitors protests and social conflicts in Peru (Defensoria del Pueblo, 2016). Following an analysis of the data, I display in white provinces that have not had any protest activity occurring during the past five years. I display in two shades of gray the provinces that had between 1 and 5, and 6-15 protests respectively. Finally, I display in black the provinces that have had 16 conflicts or more in the last five years. For the empirical analysis in Chapter 3, protest activity will refer only to protests that occurred in the wake of mining projects.

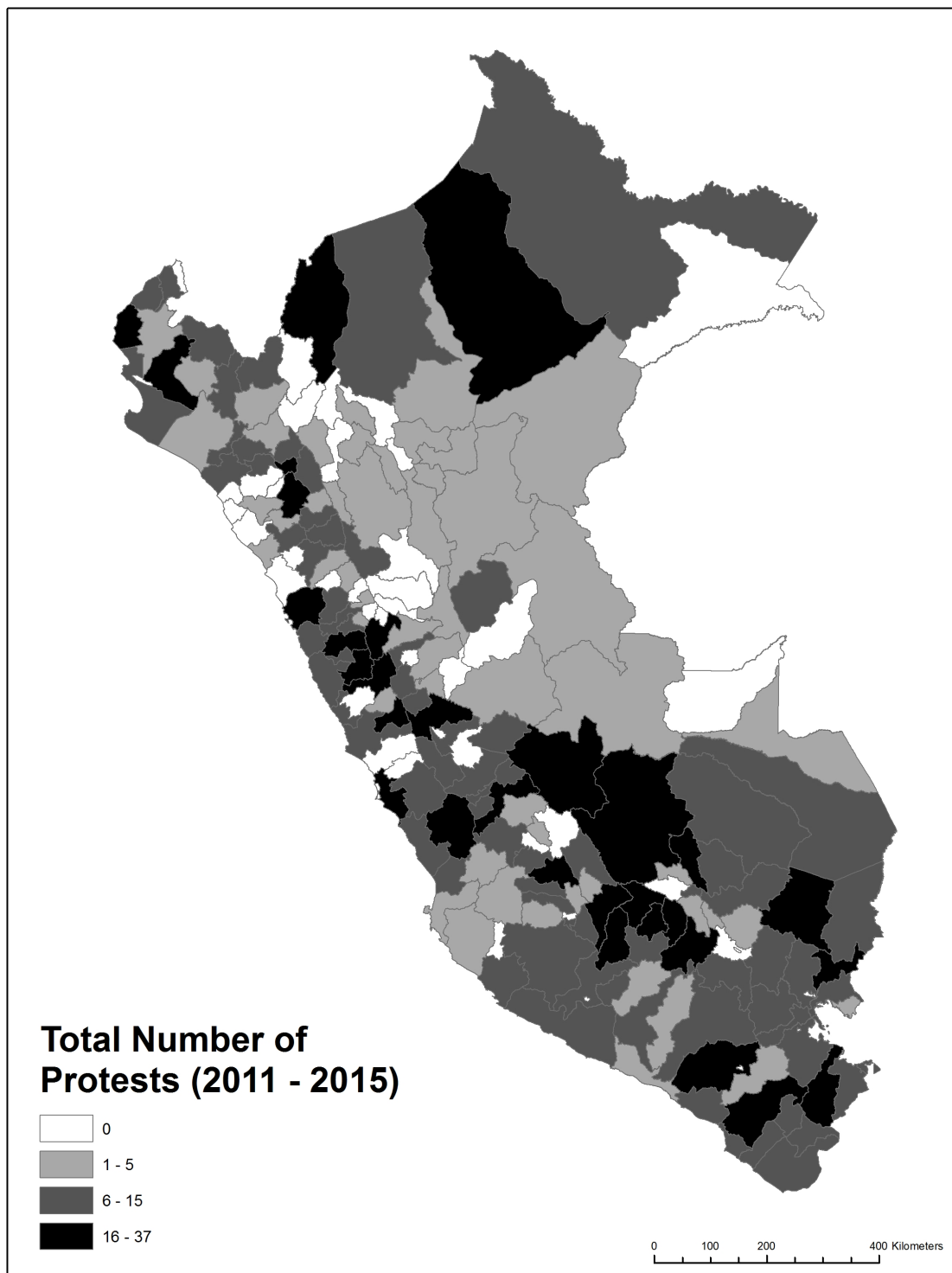


Figure 1.2: Map of Peru with Cumulative Frequency of Protest, 2011-2015

Source: Data come from the Peruvian Ombudsman's Office *Annual Report on Social Conflict*, 2016. Cumulative frequency distribution of protest covers a five-year period (2011-2015) and includes 195 provinces in Peru. Data include observations of all types of protest activity.

1.1 The Argument

To explain the spatial and cross-temporal variation in protests, I suspect that the onset of protest surrounding mining projects are somehow associated with the importance of agricultural activities. I hypothesize that a mining company's announcement of the creation or advancement of a mining project in Peru has a greater effect on the likelihood of protest, if the mining project is in a mostly agricultural province.

I examine the interaction between agricultural importance and a mining company's announcement as a determinant of variation in protest across Peruvian provinces between 2011 and 2015. I use total agricultural land as measure of the importance of agriculture in a particular province, as it encompasses different areas used for agricultural purposes, including arable land and permanent crops. Moreover, I consider all the announcements made by mining companies regarding the status of a particular mining project as a measure of mining activities. There are four categories for the announcement, which correspond to different status in the mining project, including (1) exploration, (2) evaluation of the Environmental Impact Assessment (EIA), (3) approved EIA, and (4) expansion of an existing project. Announcements of mining projects represent an ongoing dialogue between the mining companies, the government, and the local populations as they aim to inform the population about the status of a mining project.

1.2 *Agro Sí, Mina No*

The extraction of natural resources in Peru encounters opposition that could be summarized in two different sections of the literature.

First, some scholars have demonstrated that mining activities have created pressures on the quantity and quality of water resources, livelihood assets, and social relationships (Bebbington et al., 2007; Arellano-Yanguas, 2011; Arce, 2014). This literature focuses on environmental claims

made by the local population, arguing that mining activities pollute land, air, and water. Groups of farmers and peasants often use environmental claims to oppose mining companies, because they seemingly perceive mining activities as a direct threat to their economic activities. Li (2015) analyzed the environmentalist discourse in opposition to the development of mining projects, based on concerns about pollution, biodiversity, and water scarcity. Two other factors that the environmentalist discourse includes are the defense of the agricultural land and diminished water flows in irrigation canals (Li, 2015). Social movements in Peru and communities of farmers have organized over time seemingly in response to the rapid spread of mining activities across the national territory. Economic liberalization policies in the 1990s under the regime of Fujimori transformed Peru into a neoliberal state based on natural resource extraction. This model allowed the expansion of mining activities, possibly perpetuating social and environmental conflicts with local rural communities.

Another section of the literature focuses on claims based on the Indigenous cosmovision and the relationship between human and nature in the Andes and the Amazon. This literature considers that people do not oppose mining activities only because they pollute, but because nature and its beings, considered “earth-beings,” have rights of their own and thus should be respected (De la Cadena, 2010). De la Cadena (2010) writes that “the appearance of earth-beings in social protests may evince a moment of rupture of modern politics and an emergent indigeneity.” This emergent indigeneity corresponds to the model of collective well-being or *Sumac Kawsay* (“the good life” in Quechua). This lifestyle proposes building a society based on the harmony between humans and nature, which challenges the commodification of nature, and includes paradigms that consider the intrinsic value of nature itself independent from human valorization (Svampa, 2015; Gudynas, 2011). *Sumac Kawsay* also recognizes the rights of nature, which involves the respect for its existence and the maintenance of its vital cycles, structures and evolutionary processes (Isch Lopez, 2008; Walsh, 2010; Gudynas, 2011). *Sumac Kawsay* proposes new forms of relation between human beings and nature and among human beings (Acosta, 2010). Some Latin American countries

have already adopted this form of integral and sustainable human development in their state policy, including Ecuador, which modified its Constitution in 2008 in order to include nature as a subject of rights (Roca Servat, 2012; Svampa, 2015).

Indigenous communities are able to preserve their unique culture and identity, caring for an environment that will provide for generations to come. *Sumac Kawsay* is embedded in the ethical values of indigenous cultures. The lack of representation of indigenous communities and the peasantry in economic matters might lead to social conflict. The Andean cosmovision is not about beliefs, it is about the indigenous peoples' experience of reality, which combine ontological and epistemological foundations. Indigenous peoples have a different cosmovision regarding lakes, rivers, and land (De la Cadena, 2010); which has been disregarded by the state and mining companies, which have constantly tried to replace natural bodies of water with man-made reservoirs. The Peruvian state has historically ignored the interests of communities who live outside its capital, thus reinforcing an internal social division (Roca Servat, 2012).

In the empirical study about the relationship between protest, mining, and agriculture in Chapter 3, I do not include a measure that accounts for the relationship between humans beings and earth-beings based on the indigenous cosmovision. I cannot quantify the impact of *Sumac Kawsay*, as only a detailed ethnographic study could capture that relationship of harmony, and that study is outside the scope of this thesis. Therefore, I estimate Omitted-variable bias (OVB) in my empirical study and I encourage further research on the effects that *Sumac Kawsay* has in sparking protest activity in Peru. In the following sub-section I introduce examples of cases that have used different claims opposing natural resource extraction.

1.3 A Tale of Two Mines

This project aims to understand the conditions that are more likely to spark protest activity surrounding mining projects in Peru. Antonio Brack, Peru's first Minister of the Environment, ac-

curately stated, “Peru was, is, and will be a mining country. To say otherwise is an illusion” (Li, 2015). Economic activities of extraction have increased over time, with several mining projects being announced every year. The Conga Project and Lagunas Norte project are two mining projects that had discrepancies with the local communities at some point in their development, but implemented different approaches to deal with the claims made by local communities. Both projects are located near rural communities in northern Peru. Project Conga is located in the provinces of Cajamarca and Celendin in the Cajamarca region, and Lagunas Norte is located in the province of Santiago de Chuco in La Libertad region. Both projects have similar infrastructure and they are close to water sources (Triscritti, 2013). However, they only differ in protest activity that arose as consequence of its development.

The Conga Project, a gold-mining project owned by the American company Newmont Mining Corporation and the Peruvian company Buenaventura, presented an example of contentious activities expressing resistance from the local population. Triscritti (2013) reports that in 2004 violent protests arose in the wake of the development of the mining project, when protesters seemingly complained about both environmental issues concerning the use of water and indigenous resistance based on the rights of nature. The mining company planned to remove four lakes and replace them with four man-made water reservoirs. For communities of farmers, the claims were based on pollution and the use of water. For indigenous communities, the claims were also regarding water, but not as the object of their economic activities, but “water as the blood of the Earth.” This quote comes from the documentary *Daughter of the Lake* (2015), which narrates the story of Nélica Ayay Chilón, a Peruvian indigenous, who following Andean cosmovision, worships the life-bearing Mother Water present in all lakes and rivers. Nélica considers herself the daughter of these lakes that have provided life to the members of her village over generations. Confrontations between local communities and the police continued, and many people were injured and five others died. The government declared a state of emergency and the Conga Project had to be postponed for another two years. Instead of strengthening community relations, the Conga Project’s officials

believed that they had the unconditional right to operate, and managed all communications through officials in Lima rather than developing good relationships with the authorities and the community at the local level (Triscritti, 2013).

The Lagunas Norte gold mine promoted a different mining model of dialogue with the communities. Local communities of farmers often presented environmental claims related to the use of water. This mine is owned by the Canadian corporation Barrick Gold, the largest gold mining company in the world, which made efforts to incorporate the demands and grievances of the people in the local community, through the Community Grievance Management Resolution Procedures. For instance, Barrick implemented demands regarding access to labor opportunities, increase of salaries, and concerns regarding the use of water through dialogue groups between mining representatives and the local communities ¹ Barrick Gold developed a community-relation team and implemented water management systems(Triscritti, 2013). Those changes were promoted under a new framework of sustainable mining, which is often understood by the mining corporation as only economic development that will outlast the life of a mining project (Kirsch, 2010).

Conga Project and Lagunas Norte are two mining projects with similar characteristics that presented differences in the outcome of its development. Current efforts are being taken in Peru to mitigate the effects of social conflict. For instance, some mining companies, like Southern Copper Corporation (SCC), have developed on-the-ground teams of people who explain the benefits of mining to local communities. In addition, the Peruvian government has passed legislature that aim to protect the interests and demands of the local communities, especially through the Law of Previous Consultation, which aims to gain support from the local indigenous communities before the development of project that affects them. Finally, as this variation occurs at the sub-national level, it is important to understand certain characteristics at the national level to better interpret the results.

¹Diario Gestion, “Levantán bloqueos en contra de minera Barrick tras diálogo en Trujillo,” 27 February 2013.

1.4 Understanding the Peruvian Context

I perform a sub-national analysis of protest activity in Peru, and it is important to first understand the social and economic context at the national level. Peru is a country with extensive reserves of mineral resources, but it has been described by its historians as a “beggar sitting on a bench of gold.”² Despite all the potential assets that the country has, it has been unable to reach levels of development proper of late-industrializing economies. Although economic growth has been sustained in recent years, Peru is still one of the poorest and most unequal countries in Latin America, and poverty is still concentrated amongst rural and indigenous communities (Figueroa, 2009).

1.4.1 The Economic Context

A rise in the number of protests followed the neoliberal reforms adopted by President Alberto Fujimori on August 7, 1990 to stabilize the economy and bring inflation under control. During the first administration of Alan García (1985-1990), the economic situation in Peru was precarious, as hyperinflation escalated from 1,722 percent in 1988 to 7,650 percent in 1990 (Crabtree, 1995). Unemployment and underemployment levels skyrocketed and government social spending decreased abruptly. Fujimori eliminated subsidies and reduced restrictions on trade, investment, and capital flow (Crabtree, 1995). He also privatized hundreds of state-owned enterprises and replaced the inflated currency, *Inti*, with the *Nuevo Sol* (PEN).

²This quote is attributed to the prominent Italian-born Peruvian geographer and scientist Antonio Raimondi.

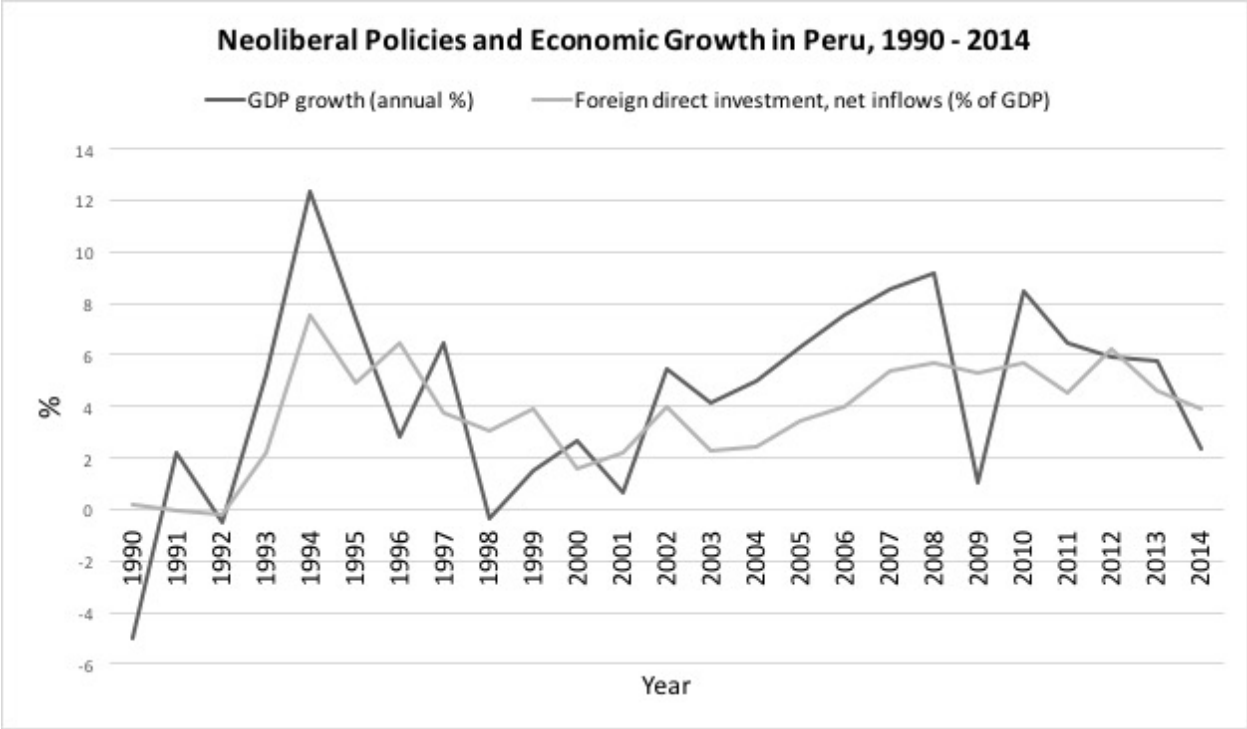


Figure 1.3: Neoliberal Policies and Economic Growth in Peru, 1990-2014

Source: Data from the World Bank, downloaded on March 29, 2016

The immediate effects of *Fujishock* appeared to be successful as it seemingly restored macroeconomic stability and promoted long-term growth in Peru. The country returned to full participation in the world trade and financial systems and inflation dropped to 139 percent by 1991 (Stokes, 2001). The graph in Figure 1.3 plots the relationship between the effect of neoliberal policies adopted in Peru in the 1990s and economic growth. The adoption of neoliberalism is measured by Foreign Direct Investment (FDI), which is representative of the liberalization of the Peruvian economy, encouraging free trade and endorsing free market operations. Economic growth is measured by GDP growth levels. Data on both economic measures come from the World Bank economic indicators. This graph shows the immediate effects of the policies of the *Fujishock* at the beginning of the 1990s. The negative economic growth increased from -0.54 percent in 1992 to 5.24 percent in 2013. In the same years, FDI increased from -0.23 to 2.22 percent. Year 1994 was the peak

for both indicators as FDI was 7.53 percent of GDP, and the GDP growth was almost 13 percent, higher than any other country in the world (Stokes, 2001).

The economy was reactivated, in part, by higher demand for Peruvian exports, especially natural resources and minerals. Fujimori reformed the mining industry by passing the General Mining Law (1992), which established investor-friendly legislation, thus making mining projects attractive for foreign investment (Glave and Kuramoto, 2002). The General Mining Law enhanced Peru's global recognition as a center of mining expansion, but also introduced the *canon minero*, an innovative tax on mining companies, which allocated 20 percent of the profit tax paid by a mining company to the territory where the profits were generated (Bebbington and Bury, 2009).³ However, deceived by positive macroeconomic indicators, Fujimori's government failed to modernize Peru's productive capacity, while reinforcing heavy reliance on primary-product exports.

The experience of Peru with the neoliberal scheme lays out the foundations for the eruption of protests in Peru. Neoliberalism imposes severe material hardships on marginalized communities, which include lower wages and cutbacks in social programs, but also produces grievances due to environmental degradation, land expropriation, inadequate job opportunities, and decreasing public expenditure in education and social benefits (Silva, 2009; Thorsen, 2010). After a decade of intensive reforms, household surveys showed that 54.8 percent of the population was still below the poverty line in 2000 (Silva, 2009). Even though reforms aimed to impose austerity, Peru did not follow the same pattern as other Latin American economies, which protested against liberalization policies. In fact, scholars considered Peru an example of "political quietism" in the wake of neoliberalism in Latin America (Silva, 2009; Rice, 2012).

Although Fujimori's shock therapy managed to control the economic crisis in the short term, it reinforced the social and economic divisions between the sectors participating in the free market and those marginalized communities, as poverty and unemployment remained threats to social integration. Understanding social exclusion and further impoverishment in the context of economic

³Since 2004, the canon has amounted to 50 percent of the total income taxes paid by mining companies.

liberalization contributes to the understanding of grievances.

1.4.2 The Social Context

The social context in Peru includes several notions of inequality and exclusion. Lack of integration of indigenous communities and the exclusion of rural communities might be a ticking time bomb of conflict in a highly diverse country like Peru.

In *Seven Interpretive Essays on Peruvian Reality*, Jose Carlos Mariátegui (1928) wrote a comprehensive explanation of the Peruvian society. Even though the writings are from 1929, most of the problems that Mariátegui identified are still present today. Mariátegui, the founder of the Peruvian Communist Party in 1927, described an embedded division in Peruvian society and the existence of “two versions of Peru:” one Peru that comprises the well-integrated and urban middle classes of Lima; and a “deep Peru”, which includes the peasantry and rural populations in the Andes and the Amazon. Mariátegui (1928) described Peru as a country that is largely rural, but poorly integrated - both physically and socially - with relatively small middle and working classes. Historically, Peru has maintained a significant rural population with an economy that was dominated by the *hacienda* system, in which the masses worked the land that did not belong to them (Mariátegui, 1928). As a response to the disparities of the *hacienda* system, the Military Revolutionary government of General Juan Velasco Alvarado (1968-1975) implemented the Agrarian Reform of 1969. The extensive land reform aimed to eliminate all large private landholdings or haciendas, converting them into co-operatives owned by prior workers on the estates (Figueroa, 2009). Even though the reform was intended to destroy the basis of power of Peru’s traditional elite, logistical problems and lack of enforcement hampered the noble goals of the reform. Instead, redistribution only benefited the workers that were better-off, leaving the rest excluded from the benefits of reform (Figueroa, 2009). The agrarian reform failed to redress the inequities that was meant to amend.

This colonial system divided land and labor, reinforced the social exclusion of marginalized

communities, and perpetuated perennial poverty, which currently affects 66 percent of the rural population (Figueroa, 2009). Perpetuating a system of inequality that has exploited the rural populations for centuries advances grievance theories, which recognize that anger, frustration, and desire present an incentive to change the status quo (Olson and Hafer, 2001). Despite positive economic performance, the United Nations Development Program (UNDP) reported that inequality remains high specially regarding infrastructure. In fact, water access in Peru was the most unequal in the Latin American and Caribbean region (Klugman, 2010).

Lack of representation of indigenous communities sparks protest as was shown in the *Baguazo*, a conflict that occurred in the province of Bagua, located in the Amazonas region. Following the Free Trade Agreement (FTA) signed between Peru and the United States in 2006, the administration of Alan García (2006-2011) opened the Amazon region for exploration and extraction of hydrocarbons and mineral resources (Arce, 2014). Indigenous organizations in the Amazon, such as the Inter-ethnic Association for the Development of the Peruvian Rainforest (AIDISEP), met the expansion of extractive activities with resistance. Contentious activities led to protests in 2008 and 2009 with the intention of repealing García's executive decree that opened the Amazon for development. As a result of violent confrontations between the police and indigenous communities, the Awajun and the Wampis, 23 police officers and 10 civilian protesters lost their lives in an event that demonstrated the struggles for land and water. The Peruvian government declared a state of emergency and sent the military to break up a local roadblock in Devil's Curve, or *la Curva del Diablo*, on June 5th, 2009. Natural resource conflict became evident in Bagua, and exemplified the unequal relationship of power between the ruling classes in Lima and indigenous and rural communities of the Andes highlands and Amazon forest.

In this context, Figueroa (2009) developed the "Exclusion Theory," in which he argues that peasant economic activities of subsistence agriculture remain largely excluded from policymaking and the market economy. Therefore, economic growth that occurs in the capitalist sector does not spread to the peasantry due to the lack of linkages between these two sub-systems (Figueroa,

2009). The peasantry in rural areas is not only poor, but most of them do not speak Spanish, are illiterate, and live in remote villages where the state does not have presence through institutions (Figuroa, 2009). When explaining the wave of recent localized protests against market policies in Latin America, Arce (2008) considered that rural villagers in Peru have been the most important social forces opposing the continuation of neoliberal policies, as opposed to indigenous movements in Ecuador and Bolivia, and the unemployed in Argentina (Arce, 2008).

Figuroa (2009) considers that property rights are essential to the efficient functioning of the market system, as lack of secure property rights are determinants of social inequality. Lack of property rights enlarge an informal economy with disadvantaged workers without rights and benefits (De Soto, 2000). One example of the relationship between lack of property rights and exclusion refers to the economic policies adopted by President Alan García during his first administration (1985-1990). He was convinced that foreign private investment had a positive impact on poverty reduction, thus granting land concessions for oil and gas exploration, mining, and logging to big multinational corporations, such as Brazil's Petrobras (Economist, 2009). These concessions were superimposed on towns and villages creating conflict as investment had surpassed private and communal property. Even though Peruvian governments have implemented land titling programs, those titles have benefited mostly people living in urban areas. In rural areas, fewer than half of landowners have titles proving their ownership (Figuroa, 2009). Villagers and farmers are constantly threatened by land invasions and government concessions to multinational corporations. These concessions are only possible due to the absence of legal ownership and insecure property rights in rural areas (De Soto, 2000).

In Peru, the quest for property rights became relevant when massive migration from rural to urban areas occurred as product of a period of internal violence due to terrorism in the 1980s, populating the outskirts of cities like Lima and Arequipa (De Soto, 2000). Peru moved from being a predominantly rural country to an urban country in the last few decades. According to the World Bank, in 1966, only 53 percent of the population lived in cities. The number increased to 78.3

percent in 2014. Massive migration had an impact on the social, economic, political, and cultural integration of the country. The social context of division and exclusion provides a framework at the national level to understand the analysis at the sub-national level.

1.5 Plan of the Thesis

The following thesis is divided into four chapters. Chapter 1 summarizes and analyzes the literature on protest and collective action. In Chapter 1, I describe the way and the will to protest. Drawing from the literature on collective action, grievances theory, political opportunities theory, and resource mobilization theory, I analyze the framework that explains the onset of protest at the sub-national level in Peru and its variation across provinces.

Chapter 2 explores an empirical relationship between protest, mining, and agriculture in Peru. I present in this chapter systematic evidence to answer the question: What explains variation in protest activity surrounding mining projects in Peru? Using an original dataset assembled from different institutions of the Peruvian government, I run a logit and OLS regressions to determine an empirical relationship among the outcomes of interest.

Chapter 3 presents a case study of the Tía María mining project, located in the Province of Islay, in the region of Arequipa. The Tía María mining project has been controversial due to its potential negative environmental impact. Protests occurred in April 2011 and continued in 2015, when anti-mining opposition began an indefinite strike. I conducted a field study in the Tambo Valley in May 2016 to interview villagers regarding their opinions of the mining project. I use this case study to validate the systematic results presented in Chapter 2, by analyzing the conditions that sparked protest activity in the Tambo Valley in 2015.

Chapter 4 concludes with the findings and discussion from the empirical analysis, as well as lessons from the case study in the Tambo Valley. I lay out the ongoing research agenda regarding the relationship among protest, mining and agriculture in Peru.

1.6 Conclusion

I conduct a sub-national analysis of Peru regarding protest activity in relation to mining activities and agriculture. I explored the Peruvian social and economic context, especially regarding the exclusion of indigenous and rural communities (Figueroa, 2009), the relationship between peoples and the environment (Walsh, 2010; Gudynas, 2011), and the neoliberal policies adopted by President Alberto Fujimori in the 1990s, which boosted economic growth and foreign direct investment in natural resource extraction activities (Bebbington et al., 2007). In a context in which protests are widespread, this project will add nuance to the current debate between economic growth and extractive practices in mining countries like Peru.

Chapter 2

Theories of Protest

What causes variation in protest across mining projects in Peru? Scholarly work on protest is extensive, but studies on Peru remain limited and focus on the grievances of social actors and the political conditions that allow mobilization (Arce, 2014; Yanguas, 2010; Bebbington and Bury, 2013), as opposed to explaining the spatial and cross-temporal variation of protest events at the sub-national level. Existing studies mainly focus on the question: Why do people protest? This puzzle is outside the scope of my thesis.

I analyze four different theoretical frameworks that explain both the will and the way of protest: grievance theories, collective action theories, political opportunities theories, and resource mobilization perspectives. A combination of these theories is necessary to have a framework to explain protest at the sub-national level, including spatial and cross-temporal variation (McAdam et al., 1996). McAdam et al. (1996) consider that when political conditions are favorable, actors can canalize their grievances from economic liberalization in order to build a coalition of civil society to mobilize and change the status quo.

Theories of protest consider different understandings of the concept of protest itself. Some definitions describe protest as any action or claim expressing disapproval by a group of more than two people separate from the organs of the state against economic and/or political elites and

institutions (Arce, 2014). However, I would use a more comprehensive definition of protest that arises after an analysis of different interpretations. Opp (2009) defines protest as collective action of individuals aimed at achieving their goal or goals by influencing decisions of a target. This definition considers two important factors: *collective action* and *goals*. Collective action refers to coordinated actions of several individuals. Protest differs from other types of collective action as protesters cannot influence the outcome themselves, such as providing a public good, as they depend on third parties, such as the government, to change the status quo.

2.1 Collective Action Theories

The literature on collective actions counts Olson's logic of collective action as its milestone work. It focuses on people's inability to overcome both coordination and cooperation problems (Olson, 1971). The ability or inability to coordinate is part of the collective action problem, since no coordination would present a failure to achieve a desired common outcome (Opp, 2009).

Cooperation problems refer to the "free rider" problem when members of a group act as rational persons who would rather consume a public good without the burden of the costs of obtaining it. The group size proposition considers that the larger the group, the less likely the public good is provided. However, if it is provided it is due to the existence of selective incentives: benefits occurring when one contributes and costs occurring when one defects (Olson, 1971). The assumption of the theory is that rational and self-interested individuals do not contribute to attain common goals (Olson, 1971). Rational individuals compare the costs and benefits of their actions, and their behavior is governed by utility-maximization (Olson, 1971). Olson considers that the costs of participating to achieve a common goal, usually the provision of public goods, are higher than the benefits (Olson, 1971). By definition, public goods are non-rival and non-excludable, thus representing a common interest. The criterion of non-exclusion allows those who did not contribute to the provision of public goods, to also consume and enjoy such goods.

Collective Action theories help explain coordination and cooperation. Protests in the wake of mining projects are not usually isolated individual actions, but rather joint actions. I witnessed collective action during my field work in towns that host the mining project Tía María in the province of Islay in southern Peru, when I saw a green-light banner with the message “Agro Si, Mina no” across many houses. Leadership in coordination is important, as it solves coordination and cooperation issues, as well as lowering the costs of collective action (Opp, 2009). In an attempt to understand why people did participate in a protest, I will summarize grievance theories, political opportunities theory, and resource mobilization theory.

2.2 Grievance Theories

Many scholars have conducted studies on the relationship between protest and inequality, arguing that grievances lead to more political participation, including contentious activities (Gurney and Tierney, 1982; Gurr, 1970). Scholars recognize that feelings such as anger, frustration, and resentment about injustice could lead people to protest (della Porta and Diani, 2006); and influence protest participation separately from rational cost-benefit calculations (Opp, 2009; Stürmer and Simon, 2009). In addition, a section of the literature on protest activity has shown that some people also protest motivated by grievances, even without resources and organization (Scacco, 2008). Empirical evidence also suggests that grievances have a causal effect on social movements participation, but not a direct effect on protest (Opp, 2009, 1988). Critics of grievance theories claim that people do not only protest when they are upset, but when they overcome the free-rider problem and are able to coordinate collective action (McCarthy and Zald, 2002; Klandermans, 1984). This is interesting in the case of the Peruvian context, where protests occurred only in certain mining projects but not in others.

“Basic needs deprivation” is considered a especially salient grievance when poverty delays economic development (Reenock, Bernhard and Sobek, 2007). In the Peruvian case, poverty is

still widespread among indigenous communities of the Andean highlands and the Amazon jungle. Poverty affects 22.7 percent of the total population in the country, but affects 66 percent of the rural population (Figueroa, 2009). Under those circumstances of poverty and deprivation, people are likely to provoke radical demands for redistributive preferences (Reenock, Bernhard and Sobek, 2007). Other scholars have described protest as an expression of “moral outrage” from perceived economic deprivation or political oppression (Martin, Brickman and Murray, 1983). The dissatisfaction of individuals with their economic situation could relinquish the risks associated with violent collective action, as they perceive a gap between their expectations and the potential to fulfill them (Gurr, 1970). Silva (2009) considers that grievances are primordial for the mobilization of social actors. Those grievances were expanded with the development of extractive economy projects or *megaproyectos*, which demanded greater need for water and land, thus exasperating conflict with local communities.

Grievance theories are understood in the context of the development of a mining project in Peru. Arce (2016) argues that individuals who perceive the impact of mining to agriculture to be detrimental, are likely to oppose a mining project; likewise, those who perceive a positive impact of mining, including distribution of revenue from extractions, are likely to support the development of a mining project.

2.3 Political Opportunity Theories

The structure of political opportunities refers to the political environment that corresponds to the “context within which politics takes place” (Eisinger, 1973, 11). Some factors include the level of community resources and the level of citizen political activity. Eisinger (1973) considers that protest is a function of political opportunities, which could be linear or curvilinear. First, in the *linear model*, there is a negative relationship between the political opportunities and protest, as increasing opportunities reduce protest behavior (Eisinger, 1973). Second, in the *curvilinear model*,

if opportunities are low, protest is absent; increasing opportunities raises protest; but when opportunities exceed a certain value, protest declines (Eisinger, 1973). In the *curvilinear model*, Eisinger assumes that rising expectations are related to impatience, and could generate discontent until demands are met, thus decreasing protest (Eisinger, 1973).

Peru presented a case of “political quietism” during the 1990s, when in many Latin America countries, protests erupted in response to economic liberalization policies, including Argentina (Murillo and Ronconi, 2004) and Bolivia (Kohl, 2002). Even though, Peru opened up to mining activities during the authoritarian government of Alberto Fujimori (1990-2000), especially with the adoption of the General Mining Law (1992), protest activity was not widespread. This theory offers the framework to understand that during Fujimori’s regime, the political opportunity structure weakened collective action as it persistently delegitimized protest (Roberts, 1996; Tanaka, 2002). Following the fall of Fujimori in 2000, the political opportunity structure was more favorable to mobilization (Arce, 2008; McAdam and Tarrow, 2001; Tarrow, 1998; Grompone and Tanaka, 2013).

Although Peru presented some cases of social protests in the 1990s and early 2000s, these events have been characterized by scholars as scattered and with minimal national importance (Arellano-Yanguas, 2008). Scholars have also considered that protests in Peru, due to their fragmentation, did not achieve an *scale-shift* phenomenon, coined by McAdam, Tarrow and Tilly (2001), while explaining the situation in which isolated instances of contentious activities transform into growing streams of mobilization (Arce, 2014).

2.4 Resource Mobilization Theory

Protest does not occur in all places where people are upset. Resource mobilization theorists abandoned earlier theories of collective action that were based on perceptions of grievances and deprivation, as grievances always exist and therefore cannot explain the ups and downs of protest cycles

(Corning and Myers, 2002). Therefore, resource mobilization theory emphasizes the opportunity rather than the desire to protest. Scholars argue that people protest because they are able to coordinate collective action and overcome the free-rider problem, focusing on the processes of resource accumulation, beyond membership consciousness and manpower, that may become available to potential movements to produce action and achieve their goals (McCarthy and Zald, 2002, 1973, 1977; Klandermans, 1984; Corning and Myers, 2002; Jenkins, 1983; Tilly, 1978). These resources support the growth and vitality of movements and movement organizations.

Resource mobilization theory emphasizes the ability of a movement to acquire resources and mobilize people towards accomplishing the movement's goals. In the literature, resource is not well explained, and rather understood as just goods that individual or collective actors can control (Opp, 2009, 139). Mobilization is understood as the process by which a group secures collective control over the resources needed for collective action (Jenkins, 1983, 532).

The resource mobilization perspective is often contingent to "scope conditions" (McCarthy and Zald, 1977, 2002). These conditions include a free society that allows freedom of assembly, freedom of speech, and where mass media are able to report protests and grievances (McCarthy and Zald, 1977; Opp, 2009). The resource mobilization approach emphasizes both societal support and constraint of social movement phenomena. It examines the variety of resources that must be mobilized, the linkages of social movements to other groups, the dependence of movements upon external support for success, and the tactics used by authorities to control or incorporate movements (McCarthy and Zald, 1977).

McCarthy and Zald (1977) argue that there is ambiguous evidence to assess that grievances and related deprivation are key variables in explaining protest behavior. Therefore, in this theory, authors do not disregard the role of grievances, but rather stress the structural conditions that facilitate their expression (McCarthy and Zald, 1973).

2.5 Conclusion

In this chapter, I summarized four theories from the available literature regarding the onset of protest, including grievance theories, collective action theories, political opportunities theory and resource mobilizations theory. I use all of these theories, with particular attention to Resource Mobilization Theory, to provide a framework to understand the variation of protest at the sub-national level in Peru. The literature on collective actions could help answer questions like: Why do some people decided to engage in protest as opposed to other types of collective action? Why do protests turn violent? Meanwhile, both political opportunities theory and resource mobilization theory stress the structural conditions that facilitate the expression of grievances, as grievances themselves are unable to explain the onset of protest.

A combination of exclusion theories, the relationship of harmony with nature, grievances, collective action, and resource mobilization theory motivate my hypothesis. Agriculture has been the primary economic activity of rural populations and it seems that the announcement of a mining project in areas that are mostly agricultural may spark protest activity.

Chapter 3

Empirical study of mining protests

In this chapter, I analyze the variation of protest activity at the sub-national level in Peru. Following the particular characteristics of the social and economic context at the national level, combined with the framework on protest activity provided by the available literature on protest, I analyze the relationship between protest, agriculture, and mining. What explains variation in protest frequency across mining projects in Peru? By using an OLS regression and a logit regression, I examine the interaction between agricultural importance and a mining announcement in determining the likelihood of protest across provinces in Peru. Sub-national analysis facilitates statistical testing of theoretical arguments.

Both mining and agriculture rely on the use of water and land, so the expansion of the mining sector might play a role in creating social conflict over livelihood assets and social relationships in farming communities. Tensions over quantity and quality of water have been seemingly aggravated by the neoliberal economic model and extractive industries that prioritize economic growth over environmental sustainability (Shiva, 2016). In Peru, the World Gold Council (2012) reported extractive activities as a substantial contributor to outstanding economic growth rates. In fact, 70 percent of the country's exports in 2007 came from extractive industries (Bebbington, 2009).

Several studies have reported that mining activities pollute rivers, lakes, air, and land, thus

fomenting the onset of conflict in areas where agriculture is another important economic activity. (Arce, 2014; Bebbington, Bebbington and Bury, 2010; Bury, 2005; De Echave, 2011; De Echave et al., 2009; Himley, 2010; Gil, 2009; Salas Carreno, 2008; Aroca, 2008). In this context, opposing arguments appeared regarding the “resource curse”. While some scholars have argued that natural resource extraction has negative consequences for economic development, civil war, and democracy at the national level (Collier and Hoeffler, 2004; Ross, 2001); others have found positive effects (Haber and Menaldo, 2011). However, most of the studies analyze the effects of natural resource extraction at the national level, with some exceptions that explore it systematically at the sub-national level. For instance, Arellano-Yanguas (2011; 2008) demonstrated the existence of a local resource curse, because in Peru social conflict arises mostly in areas where natural resource extraction occurs.

The existing literature argues that natural resources, including minerals, represent “structurally significant” resources in a country’s economic development and state building (Selby, 2005). Empirical studies have demonstrated that natural resource extraction affects rural and impoverished communities, producing grievances relating to land expropriation, pollution, environmental degradation, and inadequate job opportunities (Arce, 2014). Several studies have shown that the expansion of the mining industry has contributed to the onset of contentious activities across Latin American countries. This expansion has been described by scholars as “new mining,” and include changes in the pace and scale of the project development, as well as an increase in the interaction between extraction and investment (Bebbington, 2009). “New mining” has increased the need for water, land, and energy, while decreasing the need for unskilled labor as technological conditions have improved (Arce, 2014). Rural populations are then affected by the mining extraction.

I wrote a Pre-Analysis Plan (PAP) and registered it with my advisor, Professor Lisa Mueller, in December 2016. The PAP has the objective of holding my scholarly work accountable, preventing ethical breaches. In order to test the hypothesis that this thesis outlines to the best of my abilities, I have provided all the information necessary, including datasets and methods, before running any

empirical analysis. Following the models registered in the PAP, I have only tested the hypothesis provided and I have only used the variables presented. A PAP allows to thoroughly consider the implications of my research work, devise ways to minimize risks, and provide detailed protocols to the Institutional Review Boards (IRB) of Macalester College.

3.1 Hypothesis

The specific hypothesis to be tested is:

- **H:** A mining company's announcement of the creation or advancement of a mining project in Peru has a greater effect on the likelihood of protest, if the mining project is in a mostly agricultural province.

Rationale: Both mining and agriculture rely on the use of water for their performance. Mining activities pollute rivers, lakes, air, and arable land, thus fomenting the onset of social conflict in areas where agriculture is another important economic activity.

Observable Implications: Provinces with high levels of agriculture would have more social conflicts after the announcement of a new mine than those regions in which agriculture is not an important economic activity. If this hypothesis is true, I should observe the following implications:

1. Provinces with a significant percentage of agricultural land are more likely to experience protests in the wake of the announcement of a mining project than those provinces where the percentage of arable land is low.
2. Provinces where the percentage of the population working in mining activities is larger than the percentage of the population working in agricultural activities are more likely to experience protests in the wake of the announcement of a mining project than those provinces where the percentage of the population working in agriculture is larger.

3. Provinces where the percentage of the regional GDP coming from agricultural activities is larger than the percentage of the GDP coming from mining activities are more likely to experience protests in the wake of the announcement of a mining project than those provinces where the percentage of regional GDP coming from the population working in agriculture is larger.

3.2 Models and Estimation Strategy

In order to test my hypothesis, I first estimate a logit model where the dependent variable is dichotomous, and a value of 1 is assigned if a protest occurred surrounding a mining project in that particular province in that particular year, and the value of 0 otherwise. I use the following structural equation:

$$Protest_{it} = \beta_0 + \beta_1\alpha_{it} + \beta_2\delta_{it-1} + \beta_3\alpha_{it}\delta_{it-1} + \sigma + \epsilon_{it} \quad (3.1)$$

In this equation, β_0 is the intercept term. β_1 is the coefficient of the main effect for agricultural importance (α) at province i at year t . β_2 is the coefficient of the main effect for the mining company's announcement of the creation or advancement of a particular mining project (δ) in province i at year t . β_3 is the coefficient of an interaction term involving two variables described above: agricultural importance (α_{it}) and the announcement of a mining project (δ_{t-1}). σ represents the control variables of a province located in a particular region. Finally ϵ_{it} is the random error.

I also run a OLS regression model where the dependent variable is continuous depending of the number of protests related to mining activities occurred in a particular province in the given year. I use the following structural equation:

$$Protest_{it} = \beta_0 + \beta_1\alpha_{it} + \beta_2\delta_{it-1} + \beta_3\alpha_{it}\delta_{it-1} + \sigma + \epsilon_{it} \quad (3.2)$$

3.3 Data and Variables

The dataset I created is composed of four different databases from different institutions within the Peruvian government. I work with the latest available data sources found. However, some of the data, especially that regarding agricultural measures of arable land and agricultural land are from 2012. I do not expect a significant change in the amount of arable land in the last 5 years. Furthermore, I found a limitation in the available data to measure the outcomes of interest since I identify social desirability bias in the government datasets. Data come from different surveys and census carried by government officials or government enumerators. Especially regarding the information that came from household surveys, respondents might exaggerate or hide information if they think that it could increase taxes. Moreover, I find a limitation in the number of cases of protest activity, since the monthly reports have been produced by government institutions, based on the cases that have been reported. Finally, as I mentioned in Chapter 1, I do not include a measure that accounts for the relationship of harmony with nature or *Sumac Kawsay*, so I expect Omitted-variable bias in my data.

3.3.1 Dependent variable

The dependent variable (DV) is *protest activity* in a given province in Peru. In the logit regression, the DV is a dummy variable that takes a value of 1 if a protest occurred in the wake a mining project in that province in that year, and the value of 0 otherwise. In the OLS regression, the DV is a continuous dependent variable, which refers to the number of protests that occurred in the wake of a mining project in a province in a particular year.

I use Peruvian provinces as my unit of analysis. There are currently 196 provinces distributed across 25 regions in Peru. I have only considered 195 provinces for this study, since the province of Putumayo in the region of Loreto was only created on May 5, 2014 and there is not yet reliable data. Ancash is the region with the most provinces and it has 20 of them. Callao is considered

a region with only one province with the same name. Lima, the capital, represents a particular case because it is divided in both Lima *Metropolitana* and Lima *Provincias*, but for the purpose of analysis I consider both divisions under the same region, which I refer as Lima.

Data on protest activity come from the *Annual Report on Social Conflict*, which is prepared by the Peruvian Ombudsman' Office. Data include annual reports for five consecutive years, from 2011 to 2015. The Ombudsman's Office has data for previous years starting in 2006, but this data was under review and could not be shared at the time of writing my paper. In 2015, 260 cases of social protests were reported across the national territory. Data on protest activity are limited at the sub-national level, but the information provided by the Ombudsman's office fulfills the definition of protest that I use in this research paper and I borrow from Opp: collective actions aimed at achieving a goal by influencing decisions of a target (Opp, 2009).

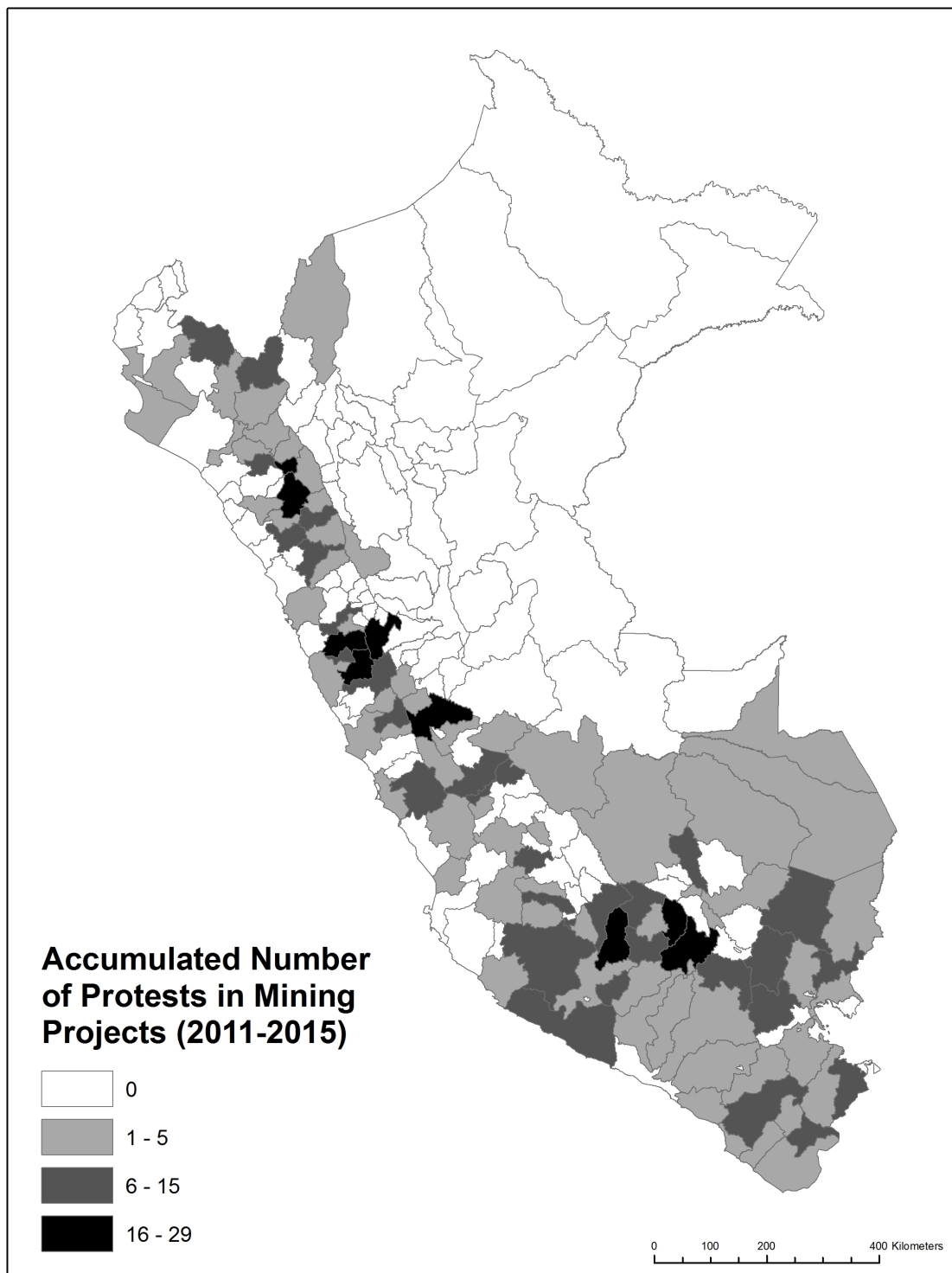


Figure 3.1: Map of Peru with frequency of protests in mining projects, 2011-2015

Source: Source: Data come from the Peruvian Ombudsman's Office *Annual Report on Social Conflict*, 2016. Cumulative frequency distribution of protest covers a five-year period (2011-2015) and includes 195 provinces in Peru. Data only include observations of protest related to mining activities.

The Ombudsman's office coded protest activities by district, province, and region. It also included two extra measures at the national level and multiregional level. Multiregional protests occurred in two or more provinces, which could be located in different regions. For instance, in 2015 there were protests registered in the area of the Lake Chinchaycocha, which recorded protests happening in the provinces of Ondores, Carhuamayo, and Junín located in the Junín region, but also in Ninacaca and Vicco, located in the Pasco region. Therefore, I include these cases in the analysis because they show variation across provinces. I will not consider national protests because they are not particular to a specific province.

The map in Figure 3.1 plots the cumulative frequency distribution of protests related to mining activities that occurred across 195 provinces in Peru between 2011 and 2015. Following an analysis of the data, I display in white provinces that have not had any protest activity in the wake of a mining project. I display in two shades of gray the provinces that had between 1 and 5, and 6-15 protests respectively. Finally, I display in black provinces that presented over 16 conflicts, including the provinces of Huari (29 cases) and Cotabambas (23 cases).

3.3.2 Independent variable

The main independent variable (IV) is the interaction between agricultural importance and a mining company's announcement of the creation or advancement of a particular mining project.

I use the percentage of agricultural land in a particular province as a measure of agricultural importance. Data on agricultural importance come from the *IV National Census of Agriculture*, released in 2012 by the National Institute of Statistics and Informatics (INEI). This information derives from household surveys, which included measures for arable land and agricultural land at the national, regional, provincial, and district level. I only consider the area at the provincial level in square kilometers (sqkm). I use agricultural land as measures of the importance of agriculture in a particular province, as it encompasses different areas used for agricultural purposes. According to the Food and Agriculture Organization (Food and of the United Nations, 1997), agricultural area

is the sum of the following areas:

1. *Arable land*: land under temporary agricultural crops, temporary meadows for mowing or pasture, land under market and kitchen gardens and land temporarily fallow.
2. *Permanent crops*: land cultivated with long-term crops which do not have to be replanted for several years (i.e. coffee); land under trees and shrubs producing flowers.
3. *Permanent meadows and pastures*: land used permanently (five years or more) to grow herbaceous forage crops, either cultivated or growing wild (wild prairie or grazing land).

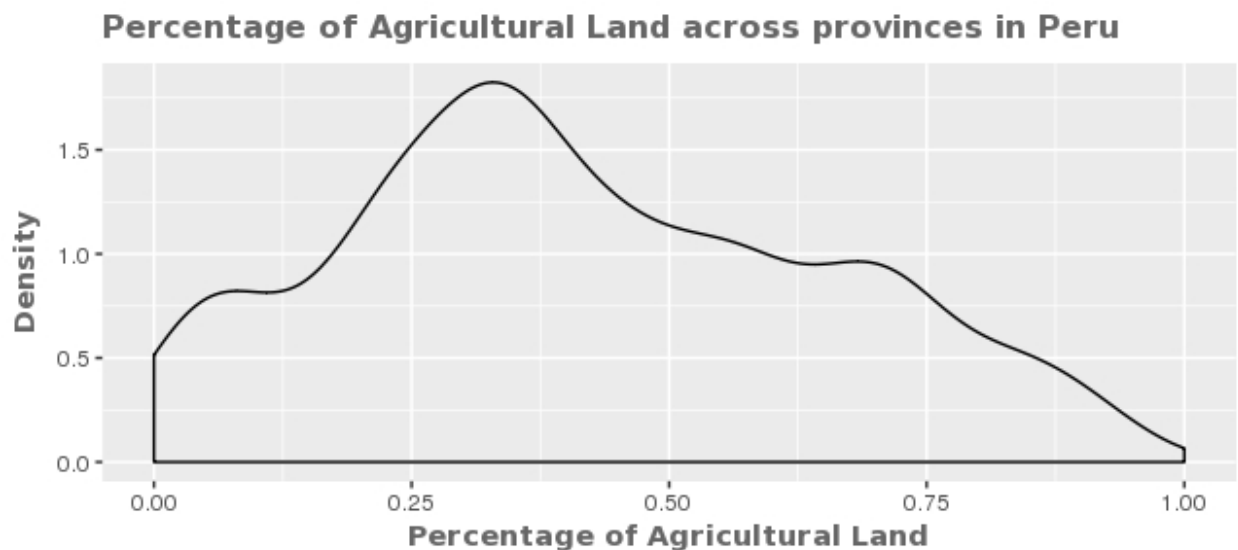


Figure 3.2: Percentage of Agricultural Land (log) across provinces in Peru

Source: Data from IV *Censo Nacional Agropecuario* 2012 , downloaded on January 2, 2017

Figure 3.2 shows the density of percentage of agricultural land across provinces in Peru. I take the log of the measure of agricultural land to have a more normal distribution. Provinces like Ambo and Yarowilca in Huanuco had over half of their territory being agricultural land.

The second part of the interaction term refers to a mining company's announcement of the creation or advancement of a particular mining project, which I will measure using the information

of the *Cartera Estimada de Proyectos Mineros*, published every year by the Peruvian Ministry of Mining and Energy (MINEM). This variable is dichotomous and a value of 1 is given if an announcement about the advancement or creation of a particular mining project occurred in the previous year in a particular province, and a value of 0 otherwise. I take the log of *announcement* to have a normal distribution.

Data come from the *Cartera Estimada de Proyectos Mineros* (portfolio of mining projects), published every year by the Peruvian Ministry of Mining and Energy (MINEM). In this report MINEM presents all the announcements made by mining companies regarding the status of a particular mining project. There are four categories for the announcement of the status of a mining project:

1. Expansion of projects in operation
2. Projects with approved Environmental Impact Studies (EIA)
3. Projects with EIA in evaluation
4. Exploratory stage of the project

3.3.3 Control variables

GDP per capita

Data on GDP per capita at the regional level come from the report *Peru: Producto Bruto Interno por Departamentos 2007-2015*. The information for this economic indicator is not available at the provincial level, so I consider this measure at the regional level and applied it to every province located in that particular region. I use GDP per capita as a proxy for the economic grievances that might increase protest activity. I take the log of GDP per capita to have a normal distribution.

Economic distribution

This variable measures the ratio of GDP in a particular province, dividing the GDP coming from agriculture by the GDP coming from mining activities. This distribution is a continuous variable that represents the importance of each economic activity.

Labor distribution

This variable measures the employment distribution between mining and agriculture based on the Economically Active Population (EPA) in every region. Data come from *Boletín Especial N° 21: Estimaciones y Proyecciones de Población total y edades quinquenales, según Departamento, Provincia y Distrito, 2005-2015*. This distribution is a continuous variable that is a ratio between agricultural and mining workers.

Density

Measure of the number of habitants per square kilometer in a particular province. More populated provinces would experience higher levels of mobilization compared to less populated provinces (Arce, 2014).

Descriptive Statistics

Table 3.1 presents summary statistics for all variables

Table 3.1: Summary Statistics

Statistic	N	Mean	St. Dev.	Min	Max
Protest	975	0.66	0.48	0	1
Protest (number)	975	1.65	1.81	0	11
Mining protest	975	0.39	0.49	0	1
Mining protest (number)	975	0.70	1.18	0	7
GDP per capita	970	13,698	6,722	7,001	47,564
Unemployment	975	2.97	0.93	1.30	5.90
Ratio GDP	975	5.11	12.32	0.09	52.67
Ratio labor	975	2,538.63	10,714.70	1.67	48,600
Area	975	6,575.49	12,208.26	146.98	119,859
Population	975	152,010	618,084	3,746	8,481,415
Density	975	86.23	528.89	0.21	6,686.62
Agricultural land (total)	975	1,986.79	2,115.18	8.01	12,041.42
Agricultural (percent)	975	0.45	0.29	0.01	2.12
Arable land (total)	975	365.39	299.30	0.44	1,623.31
Arable (percent)	975	0.12	0.12	0	1.07
Announcement	975	0.18	0.39	0	1
Announcement (number)	975	0.25	0.59	0	4

3.4 Findings

Table 3.2 displays the estimation results for the logit regression with a dummy variable for protest activity surrounding mining projects. Model 1 presents variables that are expected to explain protest activity. The coefficient for *GDP per capita* is positive and statistically significant, suggesting that an increase in GDP is associated with an increase in the likelihood of protest. This relationship is not consistent with the literature on grievances that shows that higher income is associated with less protest. The coefficient for density is negative and statistically significant, showing that a unit increase in density is associated with a decrease in the likelihood of protest. This results suggests that protest is less likely to happen when there are more people, suggesting coordination problems in more populated areas, being inconsistent with the literature that suggests

that in rural areas, residents are theoretically more likely than urban residents to face collective action problems as they are geographically dispersed and excluded from technological networks (Olson, 1971). Rural residents are also geographically farther from the government, which is the typical target of protests.

Model 2 includes one of the main effects of the interaction term, agricultural importance measured by the *Log of Agricultural land*, which has a positive and statistically significant relationship with protest activity. A unit increase in the amount of agricultural land is associated with an increase in the likelihood of protest. This relationship is consistent with the literature that identifies a conflict between mining activities and agricultural activities. Model 3 includes the other main effect, *Announcement (dummy)*, which also has a positive and statistically significant relationship with protest activity, also showing that mining activities on average spark the onset of protest.

Model 4 introduces the main independent variable-the interaction between agricultural importance and a mining company's announcement. The coefficient of the interaction term *Agriculture*Mine* becomes negative and statistically significant. Therefore, if the a mining company's announcement happens in a mostly agricultural province, the evidence suggests that the likelihood of protest decreases and the results are significant, holding all variables constant. This negative relationship is inconsistent with the literature, suggesting challenges to collective action in rural areas in Peru often related to the role of leadership in social movements.

Model 5 includes the control variables that measure the ratio between mining and agriculture in both GDP (*Log of GDP ratio*) and labor distribution (*Log of Labor ratio*). Both control variables are negative and statistically significant, suggesting that a unit increase in the importance of agriculture at the regional level is associated with a decrease in the likelihood of protest.

	Model 1	Model 2	Model 3	Model 4	Model 5
(Intercept)	-1.141*	-2.494***	-0.422	-1.528**	0.052
	(0.468)	(0.487)	(0.443)	(0.470)	(0.512)
Log of GDP per capita	0.173**	0.222***	0.085	0.121*	-0.018
	(0.054)	(0.053)	(0.051)	(0.051)	(0.055)
Unemployment rate	0.002	-0.000	0.015	0.016	-0.001
	(0.025)	(0.024)	(0.024)	(0.023)	(0.025)
Log of Density	-0.031*	0.001	-0.036**	-0.011	-0.008
	(0.014)	(0.014)	(0.013)	(0.013)	(0.013)
Log of Agricultural Land		0.113***		0.099***	0.097***
		(0.015)		(0.015)	(0.015)
Announcement (dummy)			0.442***	1.214***	1.249***
			(0.038)	(0.309)	(0.302)
Agriculture*Mine				-0.110**	-0.117**
				(0.042)	(0.041)
Log of GDP ratio					-0.060**
					(0.023)
Log of Labor ratio					-0.039***
					(0.012)
AIC	1351.363	1295.414	1227.930	1187.585	1139.759
BIC	1375.750	1324.678	1257.194	1226.603	1188.532
Log Likelihood	-670.682	-641.707	-607.965	-585.792	-559.880
Deviance	226.392	213.263	198.930	190.041	180.154
Num. obs.	970	970	970	970	970

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Table 3.2: Logit Estimation Results for Agricultural Importance in Protest Activity

Table 3.3 displays the estimation results for the OLS regression. Model 1 only includes economic indicators and demographic controls. Coefficients in Model 1 are not statistically significant. GDP per capita has a positive effect on the level of protest activity. This relationship is also incoherent with the literature on grievances that shows that higher income is associated with less protest. Both density and unemployment rate have negative coefficients.

Model 2 includes one of the main effects of the interaction term, agricultural importance. *Log of Agricultural Land* has a positive and statistically significant relationship with protest activity. This relationship is consistent with the literature that identifies a conflict between mining activities and agricultural activities, as the model suggests that an increase in agricultural land is associated with an increase in protest frequency.

Model 3 includes the other main effect, *Announcement*, which measures a mining company's announcement regarding the status of a mining project. Similar to the other main effect, the relationship between a mining announcement and protest activity is positive and significant, showing that mining activities on average spark the onset of protest.

Model 4 introduces the main independent variable, which is the interaction between agricultural importance and a mining company's announcement. The main effects and the coefficient become negative and significant. Therefore, if an announcement happens in a mostly agricultural province, the evidence suggests that the number of protest decreases. These results are not statistically significant. This negative relationship is not what I expected, especially after confirming that both main effects have a positive relationship with protest, suggesting a challenge to collective action in rural areas.

Model 5 includes the control variables that measure the ratio between mining and agriculture in GDP and labor distribution. Both coefficients are negative, and only GDP ratio between agriculture and mining is significant. Model 6 includes Clustered Standard Errors (CSE) at the regional level, in order to capture aspects corresponding to a particular cluster group, which in this case is any of the 25 regions in Peru.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
(Intercept)	-0.344 (1.142)	-2.868* (1.203)	2.250* (1.075)	0.510 (1.159)	4.524*** (1.264)	4.524 (2.760)
Log of GDP per capita	0.127 (0.132)	0.218 (0.131)	-0.182 (0.124)	-0.109 (0.126)	-0.531*** (0.137)	-0.531 (0.284)
Unemployment rate	-0.038 (0.061)	-0.042 (0.060)	0.029 (0.057)	0.024 (0.057)	0.066 (0.062)	0.066 (0.094)
Log of Density	-0.012 (0.034)	0.047 (0.035)	-0.035 (0.031)	0.004 (0.033)	0.015 (0.032)	0.015 (0.064)
Log of Agricultural land		0.210*** (0.036)		0.135*** (0.036)	0.155*** (0.036)	0.155** (0.057)
Announcement			0.777*** (0.060)	0.838 (0.499)	1.021* (0.488)	1.021 (0.925)
Agriculture*Mine				-0.014 (0.066)	-0.041 (0.065)	-0.041 (0.130)
Log of GDP ratio					-0.283*** (0.056)	-0.283* (0.134)
Log of Labor ratio					-0.010 (0.029)	-0.010 (0.070)
R ²	0.001	0.035	0.147	0.160	0.203	0.32
Adj. R ²	-0.002	0.031	0.144	0.155	0.196	0.30
Num. obs.	970	970	970	970	970	970
RMSE	1.181	1.161	1.091	1.084	1.058	0.99

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Figure 3.3: OLS Estimation Results for Agricultural Importance in Protest Activity

	Model 1	Model 2	Model 3	Model 4	Model 5
(Intercept)	-1.141*	-1.345**	-0.422	-0.511	0.784
	(0.468)	(0.493)	(0.443)	(0.469)	(0.506)
Log of GDP per capita	0.173**	0.183***	0.085	0.088	-0.024
	(0.054)	(0.055)	(0.051)	(0.052)	(0.056)
Unemployment rate	0.002	0.000	0.015	0.014	-0.022
	(0.025)	(0.025)	(0.024)	(0.024)	(0.026)
Log of Density	-0.031*	-0.034*	-0.036**	-0.036**	-0.034**
	(0.014)	(0.014)	(0.013)	(0.013)	(0.013)
Log of arable land		0.022		0.013	0.034*
		(0.017)		(0.017)	(0.017)
Announcement			0.442***	0.736**	0.871**
			(0.038)	(0.276)	(0.269)
Agriculture*Mine				-0.052	-0.080
				(0.048)	(0.047)
Log of GDP ratio					-0.032
					(0.023)
Log of Labor ratio					-0.058***
					(0.012)
AIC	1351.363	1351.623	1227.930	1230.556	1177.199
BIC	1375.750	1380.887	1257.194	1269.574	1225.972
Log Likelihood	-670.682	-669.812	-607.965	-607.278	-578.600
Deviance	226.392	225.986	198.930	198.649	187.243
Num. obs.	970	970	970	970	970

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Table 3.3: Logit Estimation Results for Arable land in Protest Activity

3.5 Robustness

To see whether the effects of agriculture are consistent, I replace agricultural land with arable land as a measure of agricultural importance. The table in Figure 3.3 plots the results from a logit model that replaces *Agricultural Land* with *Arable Land*, showing a negative but statistically significant relationship for the interaction between mining and agriculture. This model with arable land shows a similar pattern to previous models with agricultural land, displaying the positive relationship of the main effects, but the negative relationship of the interaction term.

3.6 Discussion

The results suggest that when a mining company announces the change of status of a mining project, and this announcement occurs in a mostly agricultural province, the likelihood of protest decreases. These results are not consistent with the literature on protest activity and social movements, which say that protest is more difficult to achieve in rural areas, because of a lack of collective action, thus making it more complicated to overcome coordination problems (Olson, 1971). In this thesis, the evidence suggests that in Peru, protest tends to be a rural phenomenon because the main effect for agricultural importance is positive and significant. An interesting phenomenon occurring in this relationship is that agricultural provinces have more protest, as well as places where a mining project is announced. In an attempt to further explain this relationship, in the next chapter I explore the case study of a mining company in which the announcement of a mining project sparked the onset of protest.

Another important factor to discuss is that mining companies have learned about their previous mistakes in facilitating the onset of protest. For instance, Arce (2014) argues that mining companies provide selective rewards to the leaders of protest organizations, such as bribes or employment opportunities, in order to diffuse the demands of protesters. Furthermore, mining companies have

started investing in Corporate Social Responsibility (CSR), including high-profile projects that win the support of the population through concessions (Arce, 2014).

3.7 Limitations of the Study

There are several limitations affecting this study. First, the unit of analysis of this project has been limited by the lack of available and reliable data. For instance, the Office of the Ombudsman in Peru has data regarding social conflicts only since 2004, but was only able to share their datasets since 2011 until 2015 since the remaining data is under review.

Second, I estimate Omitted-variables bias (OVB) regarding the lack of measures for the indigenous relationship with nature, which was explained in Chapter 1. In addition, I also estimate Reporting Bias as all of the data has been collected by the Peruvian government and its different institutions. Therefore, as I mentioned earlier, people might hide or exaggerate information if they expect an increase in taxes.

Finally, as protests have occurred recently, it is still early to assess their impact and I still rely on government data to determine the existence of protest. A better measure for the DV would have been create an original dataset that accounted for information on protest that the author collects based on archival research in local newspapers and mining company's websites.

3.8 Conclusion

In this chapter, I explored the empirical relationships between protest, mining, and agricultural activities using a logit regression and a OLS regression. Data for the analysis came from an original dataset compiled from different sources from the Peruvian government, including a census on agricultural land by INEI, estimates of the mining production by MINEM, and a recollection of protest activity by the Ombudsman's Office. I tested the hypothesis about the likelihood of protest

activity in the wake of mining projects in mostly agricultural provinces in Peru. I estimated that protest is more likely to happen, on average, if a mining company announces the development or expansion of a mining project in a mostly agricultural province.

Chapter 4

A case study of mining and agriculture

In this chapter, I explore the case of the Tía María mining project. Even though the results of the empirical analysis suggested a negative relationship between the announcement of a mining project in a mostly agricultural province and the likelihood of protest, this case study describes the situation of an announcement that did spark protest. The copper-project is located in the adjacent areas to the Tambo Valley, a highly productive agricultural zone in the province of Islay in Arequipa. In 2015, the government declared a state of emergency following the violent protests that took place showing opposition to the development of the mining project. Thousands of policemen and soldiers were sent to the Tambo Valley, constitutional rights suspended, more than 200 people injured and 7 people dead. The analysis of this section is based on the field study I conducted in the districts of Deán Valdivia, Cocachacra, La Curva, and El Fiscal, doing interviews with local villagers in May 2016.

Blattman and Miguel (2010) recognize the strengths of integrating cross-country statistical work, which in this case is cross-province analysis, with a historical-political case analysis. This combination aims to minimize the weaknesses of both approaches. Scholars have recognized that single case studies have the potential to illustrate causal mechanisms, generate new hypotheses, and stimulate innovative data collection (Blattman and Miguel, 2010). Therefore, I use the case study

of the Tía María mining project to illustrate causal mechanisms for the relationship established between protest, mining.

4.1 Background

Natural resource extraction has contributed to an impressive economic expansion in the Peruvian economy (Arce, 2014). Mining activities contributed to this economic performance, and in 2011 alone, mining exports represented 59 percent of all of Peru's exports (Defensoria del Pueblo, 2016). According to the Ministry of Energy and Mines (MEM), the total mining production in Peru was USD 64,590.00 millions per year in 2011 (MINEM, 2014). Record-high commodity prices and the growing Chinese demand for raw materials boosted Peruvian economic growth (Arce, 2016). For instance, Peru grew by 9.8 percent in 2008, becoming one of the countries with the best economic performances in Latin America. The GDP per capita increased from USD 4,459 in 1990 to USD 9,421 in 2012 (BCRP, 2012). Several mining projects have contributed to this growth, including the newly-proposed Tía María mining project.

The graph in Figure 4.1 shows the relationship between the percentage of GDP coming from both agriculture and extractive activities, including oil and mining extraction. Data are from INEI and present values for all years between 1950 and 2015. The graph shows that the share of the economy coming from agriculture was higher than extractive activities, including oil and mining extraction, only until 1954. According to the data for 2015, manufacturing was still the most important economic activity in Peru and accounted for 13.7 percent of the GDP. Manufacturing was followed by oil and mining extraction (12.1 percent), commerce (10.9 percent), construction (6.2 percent) and then agriculture (5.2 percent).



Figure 4.1: GDP according to Economic Activity, Peru 1950-2015

Source: Data from the *Instituto Nacional de Estadística e Informática*, Downloaded on January 20, 2017. Data shows the percentage of GDP that corresponds to both Agriculture and Extractive Activities between 1950 and 2015.

4.1.1 New Extractivism

Several studies have shown that the expansion of the mining industry has contributed to the onset of contentious politics across Latin America. This expansion has been described by scholars as “new mining,” and includes changes in the pace and scale of the project development, as well

as an increase in the interaction between extraction and investment (Bebbington, 2009). “New extractivism” has increased the need for water, land, and energy, while decreasing the need for unskilled labor as technological conditions have improved (Arce, 2014). Rural populations are then affected by the mining extraction in a country of 31.2 million people, which has rich deposits of copper, gold, silver, lead, zinc, natural gas and petroleum (EY, 2016). In fact, Peru has a long history of being a mining country. Resource extraction in the country dates back to the operations of the American mining company Cerro de Pasco Copper Corporation (CPCC) in the 1900s (Kruijt and Vellinga, 1979). Nowadays, the extraction of natural resources has contributed to recent economic growth. China is the biggest investor in Mining Projects in Peru with a registered investment of USD 13,389.00 (23.23 percent of the total mining production). Other main investors are the United States (16.7 percent), Canada (15.02 percent), Switzerland (8.73 percent), and the United Kingdom (8.39 percent), among others (MINEM, 2014). Foreign companies investing in Peru are a direct consequence of the neoliberal policies implemented by President Fujimori.

Under the “New extractivism” approach, technological improvements reduced the need for unskilled labor, thus decreasing labor disputes between mining companies and workers (Bebbington and Bury, 2009). New disputes are increasingly related to the protection of the environment. Mega extractive mining projects, *megaproyectos*, have an increasing demand for land, water, and energy. Technological conditions, such as open-pit mining and heap-leach extraction, require greater access to these natural resources. Bebbington (2009) explains that the new actors involved in protests against mineral resources extraction are the rural and urban populations affected by mining activities. Arce (2014) also explores the new actors in social conflicts, and the types of coalitions that aggrieved anti-mining groups. These coalitions traversed social classes, the urban and rural divide, and environmental and nationalistic discourses (2014).

Arce (2016) presents two types of claims regarding the diversity of mobilizations concerning mining activities: rights- and service-based claims. On one hand, rights-based mobilization attempts to defend basic rights, such as access to water, respect for the environment, and respect for

indigenous rights to land. People participating in these mobilizations frame their claims within the discourse of environmental protection (Arce, 2016). On the other hand, service-based mobilizations refers to an equitable distribution of the revenues and wealth produced by mineral extractive activities. Unlike rights-based protesters, service-based protesters do not seek to stop the activities of the mining companies (Arce, 2016). The literature on the topic of protest in Peru rarely considers the impact of agriculture as a factor explaining the onset of protest, so that is where my research project comes in.

The extraction of natural resources has accounted for conflict with local communities over the use of land and water (Bebbington, Bebbington and Bury, 2010; Bury, 2005; De Echave et al., 2009; Himley, 2010; Gil, 2009; Salas Carreno, 2008; Li, 2015). Based on the Observatory of Conflict Minerals in Latin America (OCMAL), Peru has the greatest number and severity of conflicts.

¹ For instance, the 2014 annual report from the Peruvian Office of the Ombudsman records 276 conflicts, of which 60.9 percent (or 168) are categorized as socio-environmental (Defensoria del Pueblo, 2016). This category of conflict deals with mobilizations because of resource extractive activities. In addition, over the period 2006-2011, almost 200 people have died in the country because of social protests. The deceased are categorized by the government as “victims of social violence,” as distinct from victims whose deaths result from subversive violence or common delinquency.

4.1.2 Consulta Previa

Increasing social conflicts led both local and international actors to adopt measures to promote mediation and dialogue. On the one hand, different international organizations, including UNDP, USAID, and the European Union (EU), have invested in programs to implement mediation in those conflicts. On the other hand, the Peruvian government passed laws that aim to protect the inter-

¹Data come from the *Mapa de conflictos mineros, proyectos y empresas mineras en America Latina*, produced by the Observatorio de Conflictos Mineros de America Latina, OCMAL 2015

ests and demands of the local communities, including the *Consulta Previa*, or law of consultation. In addition, the social society has launched different organizations, including the National Confederation of Peruvian Communities Affected by Mining (CONACAMI), and the Training and Intervention Group of Sustainable Development (GRUFIDES).

Mechanisms designed to mitigate social conflict are becoming widespread in Peru. For instance, the mobilizations that took place in Tambogrande, a mining project located in the province of Piura, influenced the adoption of a popular referendum to oppose the development of mining activities. In addition, the conflict in Bagua, or *Baguazo*, pressured the Peruvian government to adopt the the Indigenous and Tribal Peoples Convention or Convention 169 (C169) of the International Labor Organization (ILO), which Peru ratified in 1994, but never enforced. Peru also enforced the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) (Sanborn and Paredes, 2014). C169 promotes participation rights through consultation to indigenous communities about issues that affect them. C169 states in Article 15:

In cases in which the State retains the ownership of mineral or subsurface resources or rights to other resources pertaining to lands, governments shall establish or maintain procedures through which they shall consult these peoples, with a view to ascertaining whether and to what degree their interests would be prejudiced, before undertaking or permitting any programs for the exploration or exploitation of such resources pertaining to their lands. ²

Peru adopted the Law of the Right to Previous Consultation for Indigenous and Native Peoples, or *Consulta Previa* on September 6, 2011. Following the tragic events in the *Baguazo*, and a recommendation by the Constitutional Tribunal, the newly inaugurated President Ollanta Humala promulgated the law, incorporating C169 into national legislation (Sanborn and Paredes, 2014). This new law requires companies to seek prior consultation on development projects in indigenous lands, aiming to include indigenous peoples and local communities regarding any legislation or administrative measures that affect them (Schilling-Vacaflor and Flemmer, 2015).

²C169 - Indigenous and Tribal Peoples Convention, 1989 (No. 169)

Consulta Previa is an important law in Peru, a country with a large indigenous population, and where most of the hydrocarbon and mineral concessions are located in territories owned or occupied by Indigenous people (Sanborn and Paredes, 2014). Sanborn and Paredes (2014) explain that this law requires all concessions to private operators to consult any indigenous group affected by a concession. This legislature has been controversial since its enactment due to several factors, including the definition of who is “indigenous”, and issues with retroactivity, since ILO C169 was ratified by Peru in 1994. Despite its limitations, *Consulta Previa* is an important effort made by the government to respect the will of indigenous peoples, thus creating a framework to resist the political and economic elites in Lima. More work is necessary regarding this effort to institutionalize inter-cultural dialogue.

However, the opportunity to be consulted regarding the development of natural resource extraction projects was not a right for all local communities. The administrations of Alejandro Toledo (2001-2006), Alan García (2006-2011), Ollanta Humala (2011-2016), and that of Pedro Pablo Kuczynski (2016-present) favored an open market-economy, thus continuing the expansion of the private sector and welcoming foreign investment. The Tía María mining project is one example of the openness of the Peruvian government to foreign investment in the extractive economy. A case of a mining project that has been controversial since its announcement, and presents components that have sparked the onset of protest in a mining setting.

4.2 Field Study

Tía María is a mining project located in the Province of Islay, in the Southern Peruvian Region of Arequipa. The project is close to the Tambo Valley, a highly productive agricultural area in the South of Peru. Historically, the valley has been considered “Arequipa’s Pantry,” with important agricultural production, including rice, garlic, onion, potatoes, and sugarcane. The closest point to the Tambo Valley is the district of Cocachacra, also in the Province of Islay, 2.5 kilometers away

from the mining location (SPCC, 2015).

The polymetallic mining project, which belongs to Grupo México, has copper as its dominant metal. The mining project is expected to produce 120,000 tons of copper per year (SPCC, 2015). Southern Peru is expected to make an investment of USD 1,400.00 billion for the project, which will include the construction of two open-pits, Tía María and La Tapada (SPCC, 2015). First, it would operate the open-pit of La Tapada, which is located in Quebrada Cachullo. Second, it would operate the open-pit of Tía María, which is located in Pampa Yamayo. The mining project is expected to run for twenty years (SPCC, 2015).

An important feature of this mining project will be the installation of seawater desalination plants (SPCC, 2015). The desalination process will use water from the Pacific Ocean, due to the limited availability of fresh water in the region (SPCC, 2015). The Tambo River is the main source of fresh water, which is the basis for agriculture.

Grupo Mexico's Southern Peru Copper Corporation (SPCC) announced its activities of a detailed exploration of the reservoir of the Tía María Project in May 2003 (SPCC, 2015). In May 2008, Water Management Consultants started the preparation of the Environmental Impact Assessment (EIA) of the copper project. The EIA was revised by the United Nations Office for Project Services (UNOPS) in March 2011. The U.N. agency made 138 observations to the Tía María project's EIA, including delimitation (Arce, 2016). Social unrest initiated in April 2011 in the Tambo Valley, where demonstrators protested against the project and confronted the police (Arce, 2016). Andrés Taype Choquepuma, a 22-year-old, became the first victim of the violent protests on April 4th. Three other people died on April 7 (Hill, 2015).

In November 2013, Southern Copper presented the second EIA to the Peruvian Ministry of Energy and Mines (MEM). One year later, in August 2014, the Ministry approved the EIA of the project. Peruvian Minister of Environment Manuel Pulgar-Vidal declared that the mine's newest EIA proves "there is no chance that mining waste can ever reach nearby water supplies, particularly the Tambo River" (Hill, 2015). The Peruvian government of Ollanta Humala considered that all

the 138 UNOPS observations have been resolved by the newest EIA. The Peruvian government did not send the second EIA to UNOPS or any other independent agency for review, claiming that the EIA “has already been approved” (Hill, 2015). Southern Peru Copper Corporation (SPCC) then announced an investment of US 1,400.00 million (SPCC, 2015). NGO Labor released a report on a survey showing that 87 percent of the residents of the Province of Islay believe that a new and independent environmental impact study should be conducted for Tía María (Arce, 2016).

The Tía María mining project reveals opposition for resource extraction (Arce, 2016). The public opinion regarding mining projects is divided amongst Peruvians. There is widespread knowledge that mining produces great profits to the country’s economy. However, most Peruvians do not see themselves benefited from those gains. In May 2015, Ipsos Opinion released the results of a national survey regarding the conflict in Tía María. The survey released that in order to generate confidence within the population, the mining company should generate jobs within the local population, present an EIA that is approved by the central government, and should respect the commitments they had with the local population (IPSOS, 2015). Arce (2016) argues that individuals who perceive. In addition, the IPSOS survey presented results regarding public awareness about the mining project, which I include in Figure 4.2. It is clear to see that as protests unfolded, people became familiar with what was going on in Arequipa. Results suggested that in April 2015, only 29 percent of the population was informed about the Tía María mining project, but the rate increased to 51 percent in May 2015. In a second graph, Figure 4.3 shows the approval rates of the Tía María mining projects among the population. The pattern is clear to show that as the protests unfolded the approval rates fell from 60 percent in April 2015 to 46 percent in May 2015 (IPSOS, 2015).

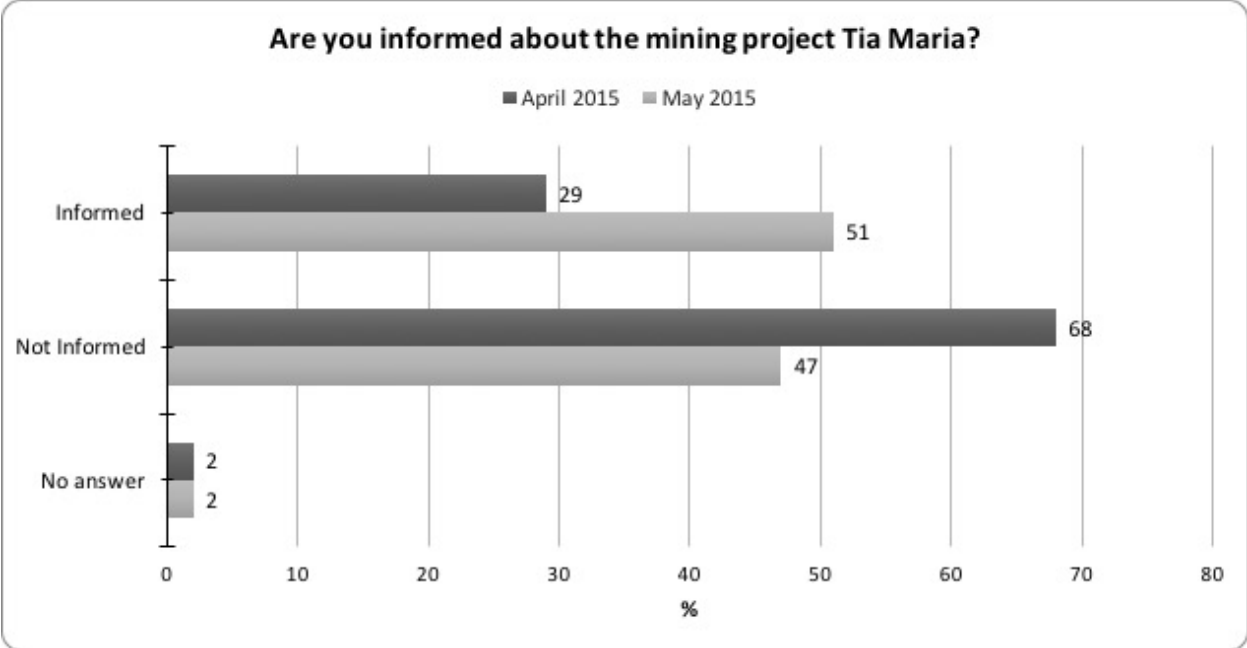


Figure 4.2: Public Awareness of Tia Maria Mining Project (2015)

Source: Data from Ipsos Opinion, downloaded on June 16, 2016

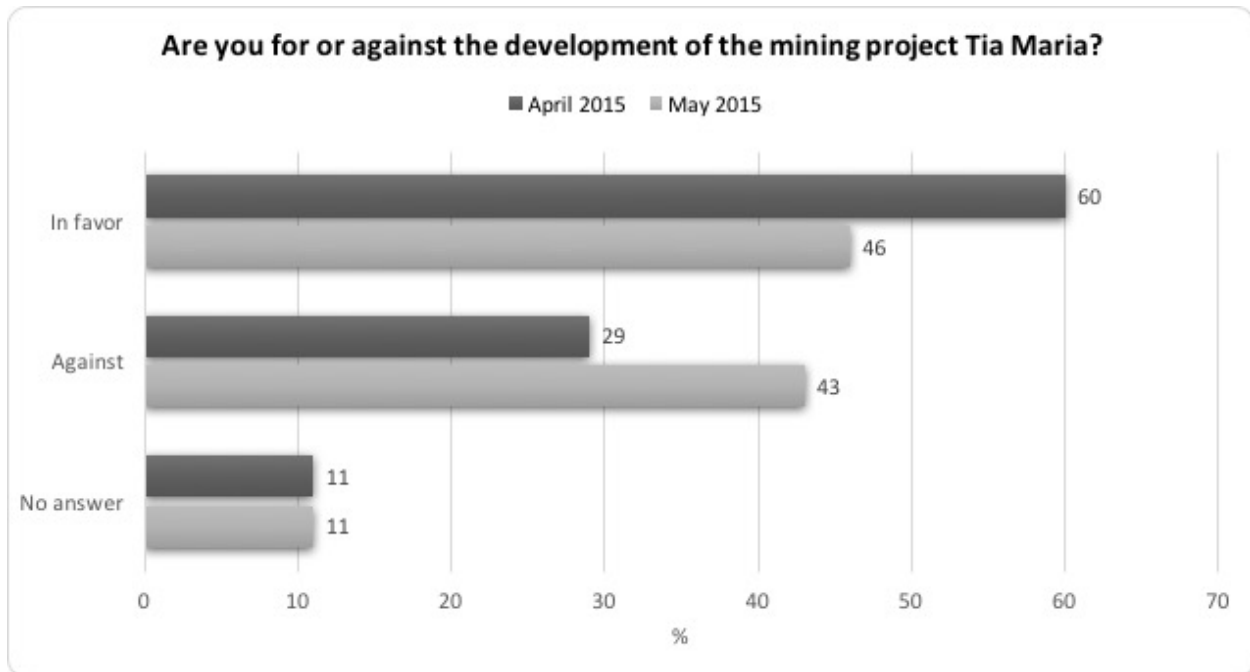


Figure 4.3: Approval of Tia Maria Mining Project (2015)

Source: Data from Ipsos Opinion, downloaded on June 16, 2016

4.3 Interviews

I conducted a total of 30 interviews with villagers and local community leaders regarding the situation of social conflict in the Tía María mining project. The information gathered is a component to answer my research question in the case study of Tía María. In Tía María I first observed the conflict between agriculture and mining as economic activities, and the use of land and water. An interesting aspect that was clear across the Tambo Valley was the extensive use of a light-green flag with the motto “Agro Sí, Mina No” (Agriculture yes, Mining not).

I interviewed people in the districts of Deán Valdivia, Cocachacra, La Curva, and El Fiscal. On May 27, 2016, I arrived to the province of Islay in the region of Arequipa and conducted interviews

independently. As per the request of the Social Sciences Institutional Review Board (IRB), all names of respondents used in this research project are pseudonyms to manage anonymity and confidentiality.

In the district of Cocachacra, 6.2 km away from the proposed mine, many of the houses had the light-green flag flying in their roofs. “Sandra,” a local young woman that worked at a local store, told me that “Agriculture is the most important economic activity in Peru, and that the Central Government, instead of supporting the development of agriculture, defends and supports the mining activities that pollute our water and destroy our crops.”³ The picture in Figure 4.4 shows the flag in the Province of Islay, which was used also in churches and schools.

Comments from the local population suggested that the mining project might cause pollution that will threat agricultural activities. The two Environmental Impact Assessment (EIAs) presented by Southern Peru are not enough to convince the local population. “Rocio,” a street vendor in La Curva district, is worried about the health of her children. “A mine pollutes. It will pollute the air, the soil, and the water. Our kids will suffer from minerals. In other mines, they found mercury and I don’t know what else in the kids’ bodies. They [the Mining company] better stay out of the Tambo Valley.”⁴

³“Sandra,” interviewed by Jhader Aguad, May 26, 2016

⁴“Rocio,” interviewed by Jhader Aguad, May 26, 2016



Figure 4.4: House with “Agro Si, Mina No” flag in Cocachacra, Islay

Source: Author’s collection, May 27, 2016

Distrust in the Central Government seemed to be widespread across the Tambo Valley. “Jorge,” a farmer in El Fiscal district, said that the government “lies and presents information that is different from reality.”⁵ He is convinced that the government represents only the interests of great multinational corporations, in this case Southern Copper, and that the interests of local communities are ignored. “They [the Central Government and/or Politicians] only care about what we think during elections times, other than that they forget about us.”⁶

The protests that took place in April-May 2015 revealed the severity of the social conflict. “Ricardo,” a truck driver in the district of Deán Valdivia, declared about the intensity of the protests.

⁵“Jorge,” interviewed by Jhader Aguad, May 26, 2016

⁶“Jorge,” interviewed by Jhader Aguad, May 26, 2016

“The police is aggressive and they have killed many farmers.”⁷ He explains that the police carried real bullets, as opposed to the established rubber bullets, which are the widely used to disperse protests and control riots.

“Sandra” points out that “the media portrays in the news that the local farmers are aggressive, but we are only defending ourselves.”⁸ This perceived bias is creating more distrust and anger from the local population. Some of the respondents were neutral about the mining project, but demanded transparency. “Miguel,” a school teacher in Cocachacra district, mentioned that “the mining project will bring progress to the Valley. I’m not opposed to the project, but I’m opposed to how’s being handled. The government cannot send the army and the mining company cannot lie about the environmental study. They need to build good relationships with the people here.”⁹ Most of my respondents when asked about a possible solution to the social conflict agreed that dialogue is important. “But dialogue in which the Central government, the mining company, and the local population are talking at the same level,” “Miguel” declared.¹⁰

4.4 Findings

My field study in the Tambo Valley demonstrated the importance of leadership in social movements. The Tambo Valley Defense Front (FADVDT) president, Jose Pepe Julio Gutiérrez, was arrested amidst a corruption scandal of bribery (Post, 2016). Gutiérrez allegedly asked for a US 1.5 million bribe from Southern Peru Copper Corporation (SPCC) to end protests, otherwise he claimed “I will burn Troy” (Post, 2016). The alleged conversation occurred between Gutierrez and an environmentalist lawyer, who claimed was negotiating on behalf of SPCC. Gutiérrez was arrested and subsequently expelled from his leftist political party Land and Freedom (*Movimiento Tierra y Libertad* (MTL)). Gutiérrez incriminated two other anti-mining leaders, Deán Valdivia

⁷“Ricardo,” interviewed by Jhader Aguad, May 26, 2016

⁸“Sandra,” interviewed by Jhader Aguad, May 26, 2016

⁹“Miguel,” interviewed by Jhader Aguad, May 26, 2016

¹⁰“Miguel,” interviewed by Jhader Aguad, May 26, 2016

district mayor Jaime De La Cruz and Tambo Valley Farmers Board president Jesús Cornejo (Post, 2016). The opinions in the Valley are divided. “Sandra” believes that the audios were fabricated by the authorities to incriminate their leader, whom she believes represent the real interests of the local population. However, “Miguel” claims that the anti-mining leadership is as corrupted as the Central Government, and that for real dialogue to happen, new elected faces should represent the interests of the farmers.

The great majority of the population at the Tambo Valley works in agriculture and they see the arrival of the mining company as a threat to their valley and their main economic activity. The majority of the population opposes the development of a mining project. In October 2014, mayors opposed to the project were elected in the province of Islay, as well as in the districts of Cocachacra, Deán Valdivia and Punta de Bombon.

Villagers declared that there were directly affected by the violent protests. The government’s decision to send the military was not well-received by the population, because they felt they were being treated as delinquents. De Echave considers that militarizing a conflict is a clear sign that the government is not prepared to deal with social protests (Hill, 2015). The use of force to control protests corresponds to an ongoing narrative used to delegitimize those claims by local actors, by calling them “terrorists” (Hill, 2015). People at the Tambo Valley mistrust the national government, which approved the EIA and issued the permits, and social factors were neglected.

4.5 Conclusion

In this chapter, I explored the case study of the Tía María mining project. Following a field study across mining towns in the Tambo Valley, I conducted interviews with community members about their opinions regarding mining activities and protest. I analyzed the relationship between mining and agricultural economic activities. In this case study I found the great impact of leadership as a factor explaining the onset of protest.

Chapter 5

Conclusions

Significance of the thesis

This thesis makes several contributions. First, it adds to the emerging literature on the existence of a local resource curse that sparks protest mostly in areas where natural resource extraction occurs (Arellano-Yanguas, 2008). Even though, the empirical results showed that the estimation results for the interaction term between agricultural importance a mining announcement were negative and statistically significant, not being consistent with the framework provided, further research is necessary to explain why when a mining project is announced in a mostly agricultural province the likelihood of protest decreases. Future research on the topic should focus on the conditions that allow mobilization in Peru, as well as more case studies from the particular mining projects where protests did not occur. Even though I developed a panel dataset with both positive and negative cases, the scope of my research did not allow me to further explore why protests did not occur? I only considered protest activity in the wake of mining projects as my dependent variable (DV), further studies should focus on the variation of protest in all categories, as well as focusing on other particular categories such as conflicts over land, conflicts over labor regulations, and other forms of natural resource extraction, such as oil and hydrocarbons.

Second, this thesis uses a mixed-methods analysis of the spatial and cross-temporal variation in protest at the sub-national level in Peru. Combining quantitative methods through two regression analyses, and qualitative methods through interviews in my field study in the Tambo Valley in the province of Islay, allowed me to present a more comprehensive picture of the variation of protest in Peru. I used a mixed-methods analysis approach because one method might be insufficient to describe thoroughly the relationship between mining, agriculture and protest activity. Drawing on the limitations of both methods and enhancing their strengths, I was able to utilize the case study in order to explain causal mechanism that the empirical analysis might have missed.

Third, I included in this thesis perspectives and personal stories that are often disregarded in studies about mining activities. *Sumac Kawsay* and the rights of nature, as well as Exclusion Theories are often not implemented as background in studies that explore the conflictivity of mining activities. I recognize the inherent value that an analysis of these concepts and theories bring to the understanding of the national context. Furthermore, my personal experience with protest in Arequipa allowed me to provide a first-hand account of some of the events.

Fourth, the conditions of poverty and inequality in Peru could only be understood after a complex and historical analysis of local factors across time. The informal economy, the lack of property rights, the exclusion of the peasant economy, internal armed conflict, and the economic crisis were factors that explained the impoverished and marginalized situation of some local communities in Peru, particularly in rural areas. The capitalist approach and the neoliberal reforms implemented by Alberto Fujimori seemingly reinforced the exclusion of the peasantry and marginalized communities in the Andes and the Amazon jungle. This exclusion might have increased grievances and might have further incremented the number of protest events across provinces in Peru.

Sustainable Mining

Can mining in Peru be sustainable? Kirsch argues that the concept of “sustainable mining” is an oxymoron itself and that there is indisputable evidence of the environmental damage caused by

mining activities (Kirsch, 2010). However, mining companies in Peru have been increasingly using the concept of sustainability, often understood by the corporation as economic development that will outlast the life of a mining project. Mining companies often avoid a definition of sustainability that focuses on the relationship between economy and ecology. This modification of the discourse on sustainability covers fact that there have been no significant reforms in how mining is practiced in countries like Peru. This concept of sustainability opposes the relationship between the environment and *Sumac Kawsay*, which promotes an environmental sustainability that is envisioned as a broad suite of healthy and durable social and ecological trends (Zimmerer, 2012).

Dialogue and Representation

Is the coexistence between mining and agriculture possible in Peru? Are efforts by mining companies to redress social conflicts enough? If not, what does it take for the local communities to accept the development of a mining project across provinces? My findings suggest that there is a need for better mechanisms of representation in social movements. Democratically elected leadership must respond to the needs and expectations of the local populations, and also represent those claims at the regional and national level. A higher demand for representation occurs in an epoch of decentralization in the Peruvian government. The government has attempted to establish roundtables for dialogue, but those roundtables do not have accurate representation of the stakeholders, particularly indigenous groups.

The rights of nature will remain as a contested topic in political spheres of Peru. The country's political and economic elites could draw from examples abroad in order to include a more comprehensive and inclusive legislature, which takes in consideration indigenous ontological and epistemological philosophies. First, the case of Ecuador represents a small victory for the indigenous populations of that country. In 2008, the government of President Rafael Correa adopted the Constitution of Montecristi, which is the first in the world to recognize legally enforceable Rights of Nature (Acosta, 2010). In the document, Articles 71-74 prohibit the extraction of non-renewable

resources in protected areas. Peruvian indigenous share a similar culture with the indigenous populations in Ecuador, but have not yet received the same level of recognition in politics or the economy. Furthermore, the case of the Maori indigenous tribe in New Zealand represents another example of the transitioning adopting of indigeneity at the national level in politics. The Maori tribe recently gained recognition for the Whanganui River, which now is recognized as a living entity with the same legal rights as a human being. Peru could further integrate its indigenous communities and the examples of Ecuador and New Zealand proved that it is possible.

The case of Máxima Acuña is helpful in understanding the conflict between mining and agriculture in the Peruvian local context. Acuña is an indigenous farmer who represents the struggle of rural communities in resisting the expansion of mining activities. She is in a legal battle against Yanacocha Mining Company, which owns the Conga Project in the provinces of Cajamarca and Celendín in northern Peru. The Conga Project would be the biggest gold mine in South America, but has been postponed by the Peruvian government after the death of five demonstrators during violent protests in 2012. Acuña is resisting the expansion of the activities of the mine, which is trying to buy her 60-acre plot of land to construct an open-pit gold mine. Acuña recently received the Goldman prize, the world's most prestigious environmental award, for her struggle against extractive activities (Collins, 2016). Acuña's award brought international attention to the struggle of thousands of farmers in Peru and further evidence the possible clashes between mining and agriculture.

The Future of Protest

This thesis is written as Peru slows its economic growth, influenced by the decline in commodity prices worldwide, the economic slowdown of China, and higher interest rates in the United States. Now, the mining boom is over and Peru's new government needs to focus on sustaining growth and social progress in a less favorable climate. The administration of Pedro Pablo Kuczynski (2016-present) should attempt to diversify the economy and increase expenditures on health

and education. In a country where almost seven million people live in poverty, a revision of the economic system is necessary. The local factors that perpetuate poverty and the exclusion of indigenous peoples and rural communities need to be addressed. Until then, the grievances of those actors will fuel social conflicts and protests across the country.

The former Wall Street investor supports foreign direct investment and has vowed to continue the neoliberal policies that have ruled Peru since the 1990s. Protest activities have occurred in the wake of a mining project during the newly-inaugurated Kuczynski administration. The mining project Las Bambas, located in the provinces of Cotabambas and Grau in the region of Apurimac, has faced strong opposition from local communities, having protests opposing its development. My findings suggest that unless more mechanisms of representation and inclusion are not developed within the framework of the state apparatus, more social conflicts will appear and more protests will occur.

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