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Accumulation by Dispossession and Electoral Democracies: An Analysis of Land Acquisition for Special Economic Zones in India

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Accumulation by Dispossession and Electoral Democracies: An Analysis of Land Acquisition for Special Economic Zones in India

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Abstract

Forcible acquisition of agricultural land to facilitate accumulation by dispossession attempts like setting up of Special Economic Zones (SEZ) is fiercely resisted by farmers in India. These agitations may determine the political viability of governments. The ability of the state to enact and implement policies favoring accumulation by dispossession is determined by the political conflict between, on the one side, the elite and the state, and, on the other side, dispossessed farmers and landless agricultural workers. The outcome of this conflict is determined by the distribution of power in society and the success of different groups in mobilizing and enforcing their class interests. Using a simple model of the political conflict over land acquisition and new data-set on SEZs that failed to acquire land from farmers, this paper shows that factors like inequality in land ownership (class) and hierarchies of caste and gender hinder the ability of small and marginal farmers from protecting their class interests even though they have *de jure* political rights and majority in the voting process. Further, excessive political competition along caste and ethnic lines weakens the political power of farmers and reduces the probability of success of farmer movements. Finally, the promise of formal employment and higher wages does not convince marginalized communities or educated farmers to support SEZs.

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1 Introduction

The process of capitalist economic development has been historically characterized by the forcible separation of labor from the means of production, a process described by [Marx \(1867\)](#) as the primary (or original) accumulation of capital. This process involves involuntary land acquisition using extra-economic methods ranging from coercion by powerful groups to the use of legislation enacted by the state to transfer ownership of productive resources like agricultural land from the peasants to large corporations.¹ Change in landownership to establish SEZs also leads to an involuntary alienation of peasants and tenant farmers from agricultural land which creates a class of workers, divorced from the means of production and willing to work as wage workers at low wages. However, electoral democracies with universal suffrage should limit the ability of elected representatives to pursue these policy choices. This paper analyzes the land acquisition process for India's Special Economic Zones (SEZs) and discuss the determinants of successful farmer agitations in the framework of *de jure* political power exercised by farmers in electoral politics.

While India has a long history of dispossessing people from their lands for developmental purpose,² [Levien \(2013b\)](#) argues that primitive accumulation does not explain contemporary forms of dispossession. He argues that the 'accumulation by dispossession' thesis propounded by [Harvey \(2003\)](#) may explain dispossession of agricultural workers, forest dwellers and marginalized groups in contemporary times. *Accumulation by dispossession* (ABD) makes land and labor available for capital to acquire at extremely low costs ([Harvey, 2005](#)). In many cases, ABD may not even relate to agricultural land but reflect the multiple demands for land and natural resources by fully developed capitalism ([Levien, 2013b](#)).³ India's Special Economic Zones (SEZs) is an example of accumulation by dispossession as it allows private companies to acquire rural land for setting up of industrial complexes, residential complexes, infrastructure projects etc. ([Levien, 2011b](#)). Such transfer is expected to *unleash* the productive potential of resources by allocating it to the most *efficient* producers. SEZs allow the transfer of ownership of rural land from cultivators to capitalists and changes the nature of land-use from agricultural to non-agricultural. In the process, it provides an opportunity for over accumulated capital to seize land and invest.

Special Economic Zones (SEZ) Act of 2005 was passed by the Parliament of India. SEZs were envisioned as comprehensive industrial townships with social facilities like housing blocks, schools and hospitals ([Hyun et al., 2018](#)). Officially, SEZs had five main objectives including: (a) generation of additional economic activity, (b) promotion of exports of goods and services, (c) promotion of investment from domestic and foreign sources, (d) creation of employment opportunities, and (e) development of infrastructure facilities. To pursue these objectives, the SEZ Act allowed large corporations and state governments to acquire agricultural land for setting up SEZs. [Balagopal](#)

¹Powerful groups include large capital, political elite or rentier classes.

²See [Levien \(2013b\)](#) and [Chakravorty \(2016\)](#) for the history of land acquisition in India after independence.

³These claims include the use of agricultural land or forest regions for development of industrial units, residential complexes etc.

(2007) argue that SEZs were approved by state governments in several states even when they were proposed on fertile agricultural land.

The development of these SEZs was proposed on rural or peri-urban land owned by farmers. This led to widespread farmer resistance against forceful acquisition of their land. This paper analyzes the role of political competition, social fragmentation and economic inequality in determining the success of farmer agitations against land acquisition.

Both ‘primitive accumulation’ and ‘accumulation by dispossession’ lead to a transfer of ownership of economic assets to benefit capitalists. However, there are two major distinctions. First, while the former is expected to transform the “*social means of subsistence and production into capital [and] the intermediate producers into wage-laborers.*” (Sanyal, 2014), the latter does not necessarily entail a *transition* to capitalism. This distinction is important as ABD may facilitate accumulation by existing capital without *creating* capitalist relations of production. Since SEZs do not create a capitalist class, it may not be an instance of primitive accumulation. However, it may lead to changes in rules governing land-use and sales which may change the social relations of production aimed at facilitating capitalist accumulation by dispossessing farmers.

Second, while it is generally agreed that *primitive accumulation* involves extra-economic means including violence, there is no consensus on the role of coercion in *accumulation by dispossession*. Harvey (2003) stresses on the “role of markets and domination of global finance” in dispossessing people of their democratic rights and public goods in developing countries. Others including Glassman (2006) and Levien (2011a) argue that extra-economic coercion is necessary to understand both concepts. However, the role of the state and use of ideological and legislative tools in facilitating the transfer of resources like land acquisition for SEZs is widely recognized. Levien (2013a) argues that land acquisition policies in the neoliberal regime in India proceed with a process of legitimizing *land grabs* to help involuntary transfer land from farmers to capitalists. This phenomenon is described by Levien (2013b) as the ‘*land broker state*’.

ABD policies like India’s Special Economic Zones Act of 2005 present an interesting paradox for electoral democracies like India. On the one hand the ruling elite depend on political support from farmers who are electorally (*de jure*) in majority for their political survival. On the other hand, the state enacts policies that dispossess farmers and transfer agricultural land to large capital. The proportion of population engaged in agriculture was around 64 percent in 2012 National Sample Survey Office (2013). This makes farmers and agricultural workers an important political constituency for electoral politics in India. It is for this reason that policies diverting agricultural land for non-agricultural use have been infrequent in the past. Bardhan (2015) shows that during the period 1967 - 2004, 85 percent of the decline in average landholding size in the state of West Bengal can be explained by demographic factors and dispossession attempts by the state have been few.⁴

⁴ *Adivasis* or tribal population living in forest regions of central and eastern India have been predominant victims of land acquisition attempts by the state. However, farmers in other parts of the country have been relatively insulated

Further, [Sanyal \(2014\)](#) argues that dispossessed farmers in India are not absorbed by the capitalist sector which creates political impediments to accumulation attempts by capital with the support of the political elite.

However, SEZ policies mark a significant departure from this rule as the state legitimized involuntary acquisition of agricultural land by large capital. This change corresponds to changes in the nature of the Indian state and polity since the economic liberalization of the 1990s. [Bardhan \(1984\)](#) identifies the capitalists, rich farmers and the bureaucracy as dominant classes in the pre-liberalization power structure of India. These classes compete and align with each other for political space and rent appropriation. Under this characterization, the interests of farmers would remain at the forefront of political discourse in the country. [Chatterjee \(2011\)](#) argues that after economic liberalization, a much larger and powerful class of capitalists has emerged which enjoys greater political power in comparison to the landed elite. Not only does this class benefit immensely from proximity to the political elite but also enjoys considerable ideological support of the urban middle-classes. As a consequence, state governments are willing to acquire agricultural land to facilitate accumulation. In Gujarat alone, the state government planned to acquire over 4000 square kilometers of agricultural land which surpassed all previous records in the state ([Dave, 2011](#)).

[Levien \(2015a\)](#) explains contemporary forms of land acquisition in India by describing different ‘regimes of dispossession’ in India. He argues that private accumulation under neoliberal policies require land acquisition by the state. Contrary to the earlier state-led paradigm of development where such attempts gained legitimacy under the rhetoric of ‘national interest’ or ‘inclusive development’, in the neoliberal era, accumulation is seen to benefit private capital and exclude the majority. Therefore, farmers have to be persuaded to part with their land using a combination of incentives and regulations. These range from violent suppression of farmer agitations, political negotiations and sharing of economic rents with the rural elite. The emergence of the large and influential capitalist class has changed policy making in India as the political elite facilitate capital accumulation but try to balance it through income transfers and welfare schemes like rural employment guarantee programs.⁵

However, the above characterization does not include the role of farmers in organizing collective resistance using their electoral majority. This paper attempts to fill this lacunae in the literature by analyzing land acquisition in the framework of *de jure* political power of citizens and *de facto* economic power of the elite developed by [Acemoglu and Robinson \(2008\)](#). They show that the elite (who are in electoral minority) can retain their *de facto* economic power even when the majority has *de jure* voting rights in democracies. Forcible land acquisition for setting up SEZs may be resisted by agrarian groups and their resistance may be consequential in electoral democracies where

([Bardhan, 2015](#)).

⁵See [Misra \(2019\)](#) for a discussion on the role of the rural elite in the functioning of India’s largest rural employment guarantee program.

majority votes are critical for determining political leadership. For instance, farmer agitations against land acquisition in West Bengal contributed to ending over three decades of left-front rule in the state (Chatterjee, 2009).⁶ This led to the cancellation of land acquisition attempts by successive government in the state and elsewhere.

Movements opposing land acquisition in India have been widespread and, in several incidents, successful in stymieing the progress of SEZs across India. The success of these land acquisition efforts is determined by the political conflict between the elite and dispossessed farmers. The outcome of this conflict is determined by the distribution of power in society and the success of different groups in mobilizing and enforcing their class interests (Acemoglu et al., 2015). By presenting a model of political conflict between small farmers and the rural elite, this paper discusses the role of socio-economic inequality and political competition in strengthening the *de jure* political power of the majority. If political participation by farmers could ensure the political process is responsive to their concerns, then we should expect democracies to reject land acquisition policies for setting up SEZs.

There are three main contributions of this paper. First, in a marked departure from existing literature, this paper seeks to explain the paradox of ABD in electoral democracies by incorporating the political costs of collective resistance by farmers against land acquisition movements. This political cost is an important determinant of the ability of the state to enact ABD policies as it determines its survival and stability. Second, using insights from literature on collective-action and community based resource management, this paper shows that successful resistance movements against land acquisition requires congruence of interests among different participants and willingness to cooperate to the resistance movement. Finally, this paper uses a new data-set on SEZs that failed to acquire land from farmers, created using documents from the SEZ Board of Approvals (BoA), answers to parliamentary questions and archival research of newspaper articles to analyze the determinants of successful farmer agitations across the country.

There are four main findings of this paper. First, inequality in land ownership and social fragmentation along caste and religious lines adversely impact the success of collective action efforts by farmers. Second, the proportion of cultivators (land owners) is positively correlated with the success of farmer agitations. Third, political competition divides the electorate on issues of identity and region which blunts collective resistance by farmers. Finally, we discuss the role of expectations of formal sector employment in SEZs and show that farmers are pessimistic about their employment prospects in the SEZs created on their lands. We find that factors like literacy rates are weakly correlated with support for SEZs. Further, marginalized communities (Scheduled Castes (SC) and Schduled Tribes (ST)) are also reluctant to support land acquisition attempts for setting up of export processing zones. This is a paradoxical result as marginalized communities are predominantly

⁶There has been significant political reluctance to amend the 1894 Land Acquisition Act which required rehabilitation of people dispossessed by the state. For instance, two attempts by the national government to change land acquisition rules failed between 2009 and 2011 (Das, 2011) In the third attempt, the government proposed to provide farmers with four times the value of their land as compensation for acquisition.

landless and the incidence of poverty is disproportionately high for these groups [Gang et al. \(2008\)](#).⁷ Given the discrimination faced by marginalized communities in the village economy, these groups would benefit from the advent of a modern manufacturing sector. However, they do not expect to gain by the employment opportunities created by SEZs.

The rest of this paper is organized as follows. Section 2 provides an overview of the Special Economic Zones in India and discusses some conflicts related to land acquisition. Section 3 discusses the how political democracies can hinder land acquisition efforts by the state. Section 4 presents a theoretical model to outline the interplay between democracies and land acquisition. Section 5 presents the data used in this analyses and section 6 discusses the empirical evidence on land acquisition in India. Finally, section 7 concludes with policy recommendations.

2 Context

2.1 Special Economic Zones in India

After economic liberalization in 1991, the share of manufactured exports in India's GDP increased significantly from 75 percent in 1989 to 81 percent in 1999 ([Aggarwal, 2002](#)). Between 2000 - 2005, India's exports more than doubled, from USD 42 billion in 2000 to USD 100 billion in 2005 ([Nayyar, 2010](#)). While several studies suggest that rising per-capita incomes contributed to rising exports ([Chandra \(2003\)](#); [Dhawan and Biswal \(1999\)](#)), India prioritized increasing exports to achieve higher economic growth. In this backdrop, the Special Economic Zones (SEZ) Act of 2005 was passed by the Parliament of India. In order to produce exports goods and attract foreign investment, the SEZ Act allowed large corporations and state governments to acquire agricultural land for setting up SEZs similar to export processing zones in China.⁸ [Balagopal \(2007\)](#) argue that SEZs were approved by state governments in several states even when they were proposed on fertile agricultural land. The minimum size requirements for India SEZs were much lower than SEZs set up in China. Information Technology (IT) SEZs were allowed to be as small as 0.1 square kilometers, multi-product SEZs needed to be at least 10 square kilometers of area ([Hyun et al., 2018](#)).

As stated above, SEZs were expected to bring large flows of foreign direct investment and spur domestic investment, which would boost economic growth at the national level. In addition, they were expected to benefit the local economy by boosting infrastructure and generating employment, creating local infrastructure and stemming rural to urban migration. This was expected to allow rural workers to diversify their incomes by reducing their reliance on the agricultural sector ([Aggarwal, 2012](#)). In light of these expected gains, the state provided several fiscal benefits like exemption from import and customs duty in procurement of input goods, full tax-exemption for the first five

⁷[Deaton \(2003\)](#) shows that in 1990 - 2000, close to 30 percent of rural India lived below the poverty line. While the SCs and STs together represent 24 percent of the population, 47 percent of rural poverty is concentrated in this group ([Gang et al., 2008](#)).

⁸See [Alder et al. \(2016\)](#) for a discussion on the impact of SEZs on economic growth in China.

years, and a 50 percent exemption in the next five years.⁹ In addition, SEZs were exempted from paying the Minimum Alternate Tax (MAT), which is currently set at 18.5% of book profits in India.¹⁰ Further, SEZs benefited from preferential processing of applications requesting permissions to expand or diversify production, “single window clearances” and exemption from various credit constraints faced by other firms (Shah et al., 2009).¹¹

2.2 Procedure for Setting up SEZs

In order to examine the causal effects of land acquisition for SEZs on rural labor markets, it is important to discuss the process of setting up an SEZ. Setting up an SEZ involved three steps: (1) approval, (2) notification, and (3) operationalization. Our empirical analysis hinges on the penultimate stage of setting up an SEZ i.e. notification. Since SEZ developers are required to provide evidence of land acquisition for a formal approval by the Board of Approvals (BoA), we can ascertain the status of land acquisition by tracing the process of SEZ approval and subsequent notification. We describe below the process of SEZ approval and notification.

In the first stage of setting up an SEZ i.e. approval, using evidence provided in the literature (Aggarwal (2007); Alkon (2018); Hyun et al. (2018)) and by examining various official notifications and orders of the government, we identify the three main steps in obtaining an approval. First, the applicant must make a formal application to the BoA of SEZs under the Ministry of Commerce and Industry. Second, after reviewing applications, the state government submits a report recommending or raising objections to the proposal of setting up each SEZ. Third, if the state government gives a favorable recommendation and the project fulfills the area requirements laid down in the SEZ Act (2005), the BoA makes its first decision. This decision could be one of the following: (a) formal approval, (b) in-principle approval, (c) deferring the decision to a later date, or (d) rejecting the proposal.

While the exact criteria for each decision is not available, a review of BoA meeting minutes reveal that the BoA grants formal approval on three conditions. First, the applicant must be in possession of the land. Second, the state government must recommend the SEZ and finally, land requirement of the SEZ must be above the minimum threshold mentioned in the SEZ Act.¹² If the SEZ developer is not in possession of the land then the BoA would grant an ‘in-principle’ approval. In the second meeting of the Board, held in June 2006, it was decided that in such cases, the developer has to approach the Board for a ‘formal approval’ after acquiring the proposed land. Finally, apart

⁹For reference, the corporate tax rate in India is 35 percent.

¹⁰The MAT is a compulsory tax levied on companies that make substantial profits but have low, or even zero, tax liability due to the host of deductions and exemptions available under the income tax law.

¹¹Single window clearances implied that applications were reviewed jointly by both the Central and State governments through a single regulatory body, the Board of Approval (BoA), which was set up to facilitate a fast pace of clearances and resolution of bureaucratic red-tape (Hyun et al., 2018).

¹²The minimum area requirement for SEZs was originally 100 hectares, but this kept changing and over time smaller sized SEZs were also approved Hyun et al. (2018). Particularly in the handicrafts sector, SEZs of 10 hectares were also approved.

from evidence of being in possession of the land, if other technical requirements (like environmental clearances or legal disputes pending on the firm) were not met, the Board decided to defer the decision on the proposal and if state governments object, the proposal is rejected.

In the next stage of setting up an SEZ i.e. notification, proposals that received formal approvals are invited to provide more details about land ownership, lease agreement and clearances from other government agencies within 30 days of the date of approval.^{13,14} If the BoA is satisfied by the documents provided by the developers, then the SEZ would be notified. Once notification is announced, the SEZ can become functional. The Board emphasizes that developers should begin operations as soon as possible after the formal notification of the SEZ. It is important to note that in most cases SEZ developers must submit details like land leasing and rental or buying agreements within 30 days of getting a formal notification. In some exceptional cases, the BoA allowed for more than 30 days for SEZ developers to provide information. The detailed procedure for approval and subsequent notification of an SEZ is summarized in Figure 1.

Based on the above framework of setting up of SEZs, we can see that land acquisition should have occurred before the BoA awards the *formal approval* to the proposal. Based on newspaper reports and answers to questions in the Parliament, we can conclude that the primary cause for not granting approval is disputes related to land acquisitions. If land acquisition efforts by the developers do not succeed then the Board does not change the *in-principle approval* of the SEZ. According to our archival research (described in detail in Section 5), during the period between 2006 - 2012, we could identify 221 SEZ projects in 88 districts which were not awarded formal approval. In some cases approvals were denied due to legal reasons and stay orders passed by the courts. However, in most cases, projects which received *in-principle approval* but failed to convert these to *formal approval* can be linked to farmer agitations. As shown by Jenkins et al. (2015), several SEZ projects fail to get notified or become operational even after acquiring land from farmers at rates lower than the market value of the land. In these cases, land is often returned to farmers. For instance, in Maharashtra, over 24,000 acres of land was returned to farmers after SEZs proposals were canceled due to farmer protests (PTI, 2015). In some cases, land is not returned even when projects were canceled and farmers had to approach the Supreme Court for their land (Rajagopalan, 2017). Table 1 shows the break-up of approved and not-approved SEZs in each state in each year between 2006-2012.¹⁵

2.3 SEZs Performance

According to the SEZ web-portal of the Ministry of Commerce in India, by 2019, more than 400 SEZ projects were approved by the government. Of these, 232 became operational and started

¹³These include the Ministry of Environment and in some cases the Ministry of Defense and External Affairs. In additional cases, the Board also requests statement of finances for green shoot developers (i.e. new firms).

¹⁴In practice, the time between formal approval and notification in many cases lasted more than 30 days and could be up to 1-2 years.

¹⁵We exclude union territories like Chandigarh and Pondicherry and small states like Goa and Nagaland from this analysis as information about farmer movements is scarce for these regions.

exports by 2019.¹⁶ More than 72 percent all notified SEZs are located in the western and southern states of Gujarat, Maharashtra, Andhra Pradesh (including present day Telengana), Karnataka, Tamil Nadu and Kerala. The SEZs relate to information technology (IT) and electronic hardwares, pharmaceuticals and biotechnology. More than 50,000 hectares of land has been acquired for setting up of these SEZs. These SEZs have created around 2 million jobs in the period between 2005 - 2017.

The BoA has claimed that SEZs have increased India's exports significantly, even in the aftermath of the economic crisis of 2008 ([Economic Bureau, 2009](#)). However, newspaper reports suggest that SEZ developers have earned huge profits by evading government taxes by taking advantage of the SEZ rules. [Aggarwal \(2009\)](#) reports that India's chief auditor found that SEZ developers evaded 20 billion INR (300 million USD) in taxes by classifying domestic sales as foreign exports. Existing evidence suggests that SEZs have contributed to increased economic activity in the neighborhood where they are created and have contributed to increasing formalization of the local labor force ([Hyun et al., 2018](#)). However, SEZs have not had a significant spill-over effect on the socio-economic development indicators like physical infrastructure including schools, tapped water supply and the provision of electricity ([Alkon, 2018](#)). [Aggarwal \(2012\)](#) argues that SEZs can promote new knowledge intensive industries to diversify production but evidence on this is scarce. [Banerjee-Guha \(2008\)](#) argue that over 62 percent SEZs produce IT-enabled services and only five percent SEZ produce manufactured outputs. Therefore, the ability of SEZs to generate low-skill employment opportunities at a large scale is low and SEZs would simply reorganize the space-relations in capitalist production by creating 'enclaves' for capitalist accumulation.

While evidence on the impact of SEZs on manufacturing output, economic growth and exports is limited, even fewer studies discuss changes in social relations of production at the local level. [Levien \(2011b\)](#) argues that SEZs do not absorb the labor dispossessed by land acquisition, but result in the creation of a rentier class of rural elite which engage in land speculation with adverse impacts on agricultural production and food security of the region.¹⁷ This rentier class, comprising of the local elite become the major beneficiaries of SEZs which weaken the traditional norms around land sales in the countryside ([Levien, 2015b](#)).¹⁸ In addition, these changes reduce women's independent rights to agricultural land and increase their burden of household reproductive work ([Levien, 2017](#)). Unsurprisingly, land acquisition attempts for setting up SEZs have met with stiff resistance from farmers in most parts of the country.

¹⁶<http://sezindia.nic.in/upload/5cdd38b952661FACT%20SHEET%2000N%20SEZs%20as%20on%2015.5.2019.pdf>

¹⁷[Levien \(2011b\)](#) shows how local elite including political leaders and large farmers buy land belonging to small farmers in the expectation that they will benefit from developing the land or selling it when prices appreciate after SEZs become functional.

¹⁸Agricultural land is related to farmers prestige and land markets in rural India are thin. Farmers sell land to pay off debts or arrange finances for weddings and bereavements [Levien \(2011b\)](#).

2.4 Land Acquisition and Farmers Resistance

Since 1950s, India has acquired around 50 million acres of agricultural land for various infrastructural, developmental and mining purposes. This has led to a displacement of close to 60 million people (Ren, 2017). This makes India home to one of the largest number of internally displaced people in the world. The SEZ Act of 2005, presents another example of development induced population displacement in India. Land for setting up SEZs is acquired by the firms directly by negotiating a ‘fair’ price from the farmers and cultivators. The rules for acquiring land for SEZs were based on the Land Acquisition Act of 1894. Under this law the state could allow for transfer of ownership of any privately owned land if it is considered necessary for ‘public purposes’. The compensation to the original owners of land was based on the official value of the land. This official value is significantly lower than the market value. However, this law has no provision for seeking consent by all those who stand to lose their land. In theory, the Land Acquisition Act can only be applied to cases where acquiring land would serve some public purpose by the government as authorized by the law. However, land acquisition attempts have been criticized for diverting fertile agricultural land away from agriculture by acquiring it at cheap rates for real estate development without rehabilitating the farmers who lose their land (Wadhwa, 2010). Further, there is no provision for the rehabilitation of land owners and tenant farmers who lose their livelihoods because of SEZs. In fact state governments often try to reduce compensation paid to farmers using fraudulent and violent means.

Farmer agitations in the eastern states of Orissa and West Bengal have garnered the most media attention. In a project involving the South Korean Steel giant POSCO, in Odisha the state government manipulated records to reduce compensation paid to farmers and suppressed farmer agitations violently. This prompted international outrage and organizations like the Amnesty International issued statements against human rights violations involved in land acquisition attempts by the state (Amnesty, 2013). In the case of POSCO, villagers organized a resistance movement by erecting barriers, forming human chains, and drawing enough media attention to make violent removal politically difficult till 2011 (Levien, 2012). In West Bengal, in 2007, in Nandigram, police fired upon local farmers protesting against land acquisition initiated by the state government to attract an Indonesian firm to build a chemical plant which killed 12 villagers (Ren, 2017).

There are also instances of farmer agitations in Northern India. In 2010, thousands of farmers marched into the national capital from the neighboring state of Uttar Pradesh to oppose the “forcible” acquisition of their land by the state government for setting up SEZs. Cornered over sustained land acquisition protests, the state government decided that it would no longer be involved in acquiring land directly for private sector projects. Pai (2010) documents that farmers in Greater Noida in Uttar Pradesh were allowed to independently negotiate land prices with SEZ developers and sign agreements which both parties respected. In other cases, state governments of Punjab and Haryana were forced to revisit their land acquisition policies and offer generous compensation to farmers facing dispossession. This included skill development and promise of employment, addi-

tional plots of land and 33 year annuity payments (Kaur, 2010). In Chandigarh, farmers themselves demanded the rights for setting up IT enabled SEZs and controversial land acquisition plans by the government be stalled and investigated for corruption (Express News Service, 2009). Similarly, in 2010 farmers in Nindar village of Jaipur in Rajasthan dug holes in the earth which farmers (both men and women) occupied day and night (Khaled, 2007).¹⁹ SEZs in the northern and eastern part of India have failed to become operational and only 24 percent of all functional SEZs are situated in this region. Major SEZs in Bengal and Odisha were scrapped even before they became notified as land related agitations by farmer organizations deterred land acquisition attempts by the state.

Farmer agitations have also been seen in the states included in this study. In a detailed study of land acquisition in Andhra Pradesh, Rawat et al. (2011) find that land acquisition was not based on consent and in several cases, land distributed to marginalized communities under previous government programs was forcefully acquired for SEZs. Further, in Chittoor district of Andhra Pradesh, compensation between 2.5 lakhs to 3 lakhs per acre was paid to large landowners and small farmers were not paid any compensation but were promised employment opportunities in the SEZs Balagopal (2007). In 2009, around 4,000 farmers staged a rally against acquisition of 5,000 acres of land for industrial purpose in villages near Sanand by Gujarat Industrial Development Corporation (PTI, 2013). In Maharashtra several SEZ projects were canceled owing to difficulties in land acquisition and protests by farmers (Sebastian, 2012). Major capitalists also expressed frustration at the reluctance of state governments in helping them acquire land for setting up SEZs as farmer agitations make elected representatives highly unpopular with their constituents (Layak et al., 2012). Farmer protests against land acquisition are also documented in Nandagudi in Karnataka, Baikampady in Mangalore and Raigad in Maharashtra. These protests were often against forced eviction of farmers from fertile agricultural land. For instance, in Kakinada in Andhra Pradesh, an oil based SEZ project was approved on over 9,000 acres of land which was used by farmers for double-cropping of paddy in a year (Balagopal, 2007).

Forceful eviction of farmers from their land and insufficient and unjust compensation paid to farmers is the primary reason for farmer agitation against SEZs throughout the country.²⁰ However, there is considerable state level variation in the politics and protests across India since every state can formulate its own policies regarding land acquisition. Bedi and Tillin (2015) comparatively examined the multifaceted stances of state governments toward land acquisition and identified a set of different responses to rural protests. For instance, they find that governments resorted to violent crackdown in Odisha and West Bengal but offered incentives to defuse opposition in Rajasthan. Further, states also manipulated legal and procedural processes to facilitate land deals in Gujarat and Maharashtra while co-opting resistance in West Bengal and Goa, and non-response such as in Karnataka. Further, Vijayabaskar (2010) shows that land acquisition for SEZs in Tamil Nadu was

¹⁹A synopsis of farmer struggle against land acquisition can be found [here](#).

²⁰See Jenkins et al. (2014) for details of various protest movements against land acquisition for setting up SEZs in India.

completed without significant farmer resistance. They argue that the state level variations need to be understood within local political and economic contexts.

3 Democracy and Dispossession

Democracies present an interesting setting to understand ABD. Forceful land acquisition for accumulation under SEZs may be opposed by agrarian groups and their resistance may be consequential in democratic countries like India. Movements opposing land acquisition in India have been widespread and in several incidents successful in stymieing the progress of SEZs across India (Levien, 2013b). Historical evidence suggests that ABD efforts by the state themselves may fall prey to problems of corruption and rent-seeking and may not succeed in establishing capitalist relations of production (Khan and Jomo, 2000). Alternatively, Brenner (1976), argues that dispossession is essentially a political phenomenon whose success is determined by class-struggle between the capitalists and the state on the one hand, and dispossessed farmers and workers on the other.

SEZs, like all instances of accumulation by dispossession rely on the political legitimacy granted by the state through legislation. The ability of the capitalists to secure such political patronage depends on the stability of exclusionary institutions and laws favoring the elite. These exclusionary institutions are in turn, determined by the distribution of *de facto* power in society and the success of the elite in mobilizing resources to protect their class interests (Acemoglu et al., 2015). If political participation by the majority could lead to egalitarian economic polices, then we should expect non-democracies to favor exclusionary and accumulation oriented polices like SEZs. On the other hand, if democracies can effectively include the poor in the electoral process, policies favoring redistribution reducing inequality may be enacted (Meltzer and Richard, 1981).

However, the role of democracy and institutions is far from straight-forward. Bowles and Gintis (1988) argue that the political structure of an economy determines the rules of investment, production and exchange between individuals or groups with decision-making authority (*economic power*). They show that if economic exchanges undertaken in the absence of ‘perfectly-enforced’ property rights lead to political conflicts. In such cases, the original assignment of property rights and the rules regarding their creation become relevant not only in determining the balance of power in economic transactions but also in determining the residual claimant of the rents generated by such exchanges.

Acemoglu and Robinson (2006) show that changes from non-democratic to democratic political systems may not lead to changes in economic institutions that favor the majority. This is because, changes in the identity of political elites do not necessarily create the incentives to change the oligarchic system of governance that benefits the rulers (Michels, 1915).²¹ Further, Acemoglu (2003)

²¹Michels (1915) refers to this system as the Iron law of Oligarchy, which refers to a system in which changes in the identity of the political elite do not create incentives for changing exclusionary economic institutions like slavery, forced labor or depressed wages.

show that often inefficient institutions and policies are chosen by the elite because they serve the interests of politicians or social groups that hold political power at the expense of the rest.

[Acemoglu and Robinson \(2008\)](#) extend this framework of ‘enforceable property rights’ by introducing the distinction between *de jure* and *de facto* political power as determinants of economic outcomes. While the former is determined by formal political institutions like constitutions and laws, the latter depends on organizational ability, investment and other factors determined by class-struggle in the economy. They argue that this *de facto* power is critical in determining that economic policies enacted even by democratic states that favor the elite. They show that if the elite feel that their *de facto* power is being eroded by *de jure* power of the majority, they may sufficiently mobilize their resources to ensure that their class interests are preserved even under democratic political institutions. Alternatively, the majority; by virtue of their numbers may not be able to solve their collective action problem ([Olson, 2009](#)) and lose the political conflict over their resources to the elite.

In this scenario, democratization may have a negative impact on redistribution and inequality. Similarly, the effect of democracies in preserving the interests of the majority may be constrained by either *de jure* institutions such as parliaments, conservative political parties and judiciaries. Alternatively; threats of *coup d’état*, capital flight, or widespread tax evasion by the elite ([Acemoglu et al., 2015](#)) can impose limitations of the political power of citizens. In the case of SEZs, land needed for setting up of export processing zones was to be acquired by firms directly by negotiating a ‘fair’ price with the cultivators. The rules for acquiring land were based on the Land Acquisition of 1894. Under this law the state could allow for transfer of ownership of any privately owned land if it is considered necessary for ‘public purposes’. This provision is also known as the ‘eminent domain’ clause of the SEZ Act of 2005. This is an example of *de jure* political institutions designed to strengthen *de facto* power of the elite. Further, the use of extra-judicial means including unfair compensation and forceful eviction through coercion and use of violence by the state police by the state discussed in section 2, demonstrate that the elite use their *de facto* power to ensure their control over rents generated in the economy.

Moreover, democracy often results in the transfer of political power to the middle class rather than the poor. Therefore, in these cases, redistribution may occur only when the middle class is in favor of such redistribution ([Stigler, 1970](#)). In light of this, we can see that democratization of the political process does not necessarily restrict policies like SEZs which disproportionately benefit the capitalist minority at the expense of a large majority of workers and cultivators who are under-represented in the national discourse. The educated urban middle-class may be in favor of policies like SEZs which create employment opportunities for them ([Jenkins, 2011](#)).

However, the result of class-conflict between the elite and small farmers over ownership of agricultural land may be contingent on several factors. [Banerjee and Duflo \(2014\)](#) argue that outcomes of economic and political processes may not be fully deterministic and can be altered by solving coordination problems, aligning expectations and beliefs among large sections of society. This pro-

vides the role for formal rules and public policy based change in outcomes that benefit the masses. The National Employment Guarantee Act of India which provides 100 days of public employment to ever rural household in India is one such example. Alternatively, economic outcomes adversely affecting the poor can be corrected by collective action efforts by the masses. The next section presents a simple model to discuss the factors that contribute to the weakening of farmer movements and enabling the state to undertake ABD policies in democracies.

4 Model

The model below first presents the baseline characteristics of a rural economy which underscore the potential land rents that can be extracted by transferring ownership of land from small-farmers to local elites. We then proceed to show how the political contest between the two social groups determines the success of land acquisition attempts in democratic societies. The model applies the framework of *de facto* economic power developed by [Acemoglu and Robinson \(2006\)](#) to political decision-making in democracies based on the median-voter theorem ([Meltzer and Richard, 1981](#)) and the role of non-economic factors like caste fragmentation in determining re-distributive policies using [Roemer \(1998\)](#). Using the rents generated for the elite by the creation of SEZs, we analyze the plausibility of elite mobilization for SEZs, in light of the political opposition mounted by farmers to save their land from dispossession.

4.1 The Basic Set-up: Rural Class Structure

Consider a village economy comprising of p small-farmers each owning a small plot of land l^p ²² and e large landowners or elites owing l^e units of land.²³ By definition, the size of land owned by large landlords is larger than that owned by small peasants ($l^e > l^p$). Assuming that the total population of the village is normalized to unity, a fraction γ of the population comprises of large landlords. Correspondingly $(1 - \gamma)$ is the proportion of small-farmers and we assume that small-farmers outnumber the large farmers, $(1 - \gamma > 1/2)$.

Before accumulation by dispossession takes place, agriculture is the primary occupation of the rural economy. If θ is the proportion of rural land belonging to elites, average land size for the small-farmers and elite is given by the following.

$$l^p = \frac{(1 - \theta)\bar{l}}{1 - \gamma} \quad \text{and} \quad l^e = \frac{\theta\bar{l}}{\gamma} \quad (1)$$

²²Family members of small-farmers work on their own farms and they do not hire in any labor ([Sen, 1962](#)). In addition, at least one member of the household works as a wage worker employed by large landowners. Therefore, small farmer households are net sellers of labor in the economy.

²³Large farmers can either cultivate their land themselves or rent it out to tenant farmers. Their role as owners of land is important in protecting their class interests as net buyers of labor power and engaging in production. In the political struggle, they will seek to increase their rents through land acquisition.

Where \bar{l} is the average agricultural landholding size in the village given by the following.

$$\bar{l} = \frac{1}{n} \sum_{i=1}^{i=n} l_i \quad \text{where} \quad n = p + e$$

Every individual i belongs to one of the two mutually exclusive sets, elites r or small-farmers s . Using their initial endowments of land, both elites and small-farmers ($\forall i \in (r, s)$) engage in agricultural production. Additionally, small-farmers also work as wage labor to supplement their farming incomes.²⁴ Any changes in landownership of both groups changes their production or labor supply choices as discussed below.

A Elites

Each member of the large landowning class $i \in r$ can engage in two types of production depending on their land ownership. If the average landholding of the elite is l^e , then they engage in agricultural production using land and labor as inputs with total-factor productivity (ψ). Alternately, if they are able to acquire additional land so that $l > l^e$, they can engage in non-agricultural production with higher total factor productivity (ϕ) which would increase their earnings ($\phi > \psi$). In practice, land acquisition under SEZs would lead to a transfer of ownership of agricultural land from farmers to non-farmers (industrial capital). In this process, the class-structure of the economy also changes and in addition to rural elite and small farmers, industrial capital also enters the economy. However, post-land acquisition the rural elite themselves diversify from agricultural production to real-estate development and other non-agricultural activities (Levien, 2011b). Correspondingly, this model assumes that land acquisition allows large agricultural producers (rural elite) to transition from being agricultural producers to industrial capitalists. This is a simplifying assumption as adding a separate category of urban industrial capital does not alter the main intuition of the model.²⁵

We assume that land is the only constraint and if the elite can acquire the additional land then they can transition from agricultural to non-agricultural production without any costs.²⁶ Therefore, the production function for an elite $i \in e$ is given by the following.

$$Y^r = \begin{cases} \psi F(l_{i \in r}, n_a^i), & \text{if } l_{i \in r} \leq l^e \\ \phi F(l_{i \in r}, n_{na}^i), & \text{if } l_{i \in r} > l^e \end{cases} \quad (2)$$

²⁴The output produced by small farms is not sufficient to sustain their families. Therefore, they need to rely on alternative sources of income like public and private wage employment. As stated earlier, small-farmers rely on unpaid family labor to cultivate their land which allows some members of the family to work as wage workers.

²⁵This paper aims to analyze changes in the rural class structure after land acquisition. The assumption of rural elite transforming to non-agricultural production is a manifestation of this change. Even if we assume urban capital entering the village, the role of rural elite should be in accordance to the predictions of this model.

²⁶This assumption implies that physical infrastructure like link roads etc. exist and the elite have the technical expertise to transition from agriculture to manufacturing.

Where, l is the land owned and n_a is the labor employed by the each elite if they engage in agricultural production and n_{na} is the labor employed if they engage in non-agricultural production. In both cases, the production function is characterized by constant returns to scale. From the production functions, we can see that labor productivity in both scenarios, depend solely on the total-factor productivity in each case. Therefore, in principle, non-agricultural production should hire more workers than agricultural production ($n_{na} > n_a$) since ($\phi > \psi$). This is a common argument made in support of accumulation by dispossession proposals. However, the labor demand after land acquisition will depend upon the resources spent in winning the political contest between the two classes in democratic societies as we discuss below.

B Small Farmers

Small-farmers own l^p units of land and one unit of labor. They work on their own farms and as wage workers for the elite. Their labor supply decisions depend on the productivity of their land and their ability to retain their initial endowment of l^p units of land after land acquisition attempts.²⁷ The production function of small-farmers is given by the following.

$$Y^s = \begin{cases} \tau n_c, & \text{if } l_{i \in s} = l^p \\ 0, & \text{if } l_{i \in s} < l^p \end{cases} \quad (3)$$

Where τ is the average and marginal productivity of labor on family farm and n_c is the number of hours spent by workers cultivating their family farms. Given the production functions of the elite and small farmers from equations 2 and 3 respectively, the market clearing condition defined by the labor supply curve in each case can be written as follows.

$$1 \geq \begin{cases} \sum n_a + N_c, & \text{where } N_c = \sum n_c, \text{ if } l_{i \in e} \leq l^e \\ \sum n_{na}, & \text{if } l_{i \in e} > l^e \end{cases} \quad (4)$$

We now turn to calculating the rents before and after land acquisition that the elite will appropriate. However, we first impose the following restriction on the parameters in the production function to avoid trivial solutions.

Assumption 1: The productivity of labor in self-cultivated small farms (τ) is less than the productivity of labor in all other forms of employment. This is because the small size of land owned by peasants may not allow them to use advanced technology or greater mechanization that large

²⁷Land acquisition may not affect all small peasants in the village. However, once customary rules of land-ownership are changed through land acquisition, there is greater uncertainty associated with agricultural production which adversely affects small farmers (Levien, 2012). Further, like primitive accumulation, accumulation by dispossession also creates a class of workers who can be employed in capitalist production. Therefore, this model assumes that ABD will eventually lead to the creation of landless workers who work for the local elites in non-agricultural production in SEZs.

farmers can employ. This assumption also allows us to create a fall-back position or wage floor for workers.

Given the market clearing condition from equation 4, we can derive the factor prices for land and labor before and after land acquisition. In each case, we first assume competitive labor markets and subsequently assume labor repression by the elites. Labor markets may be characterized as repressive if land is concentrated in the hands of a few large landlords who use their control over labor demand to keep wages depressed below the wage rates of competitive markets. This allows us to calculate the rents that can be generated by land acquisition.²⁸ These rents would subsequently form the basis for the political contest which would determine the success of land acquisition attempts by the elite.

4.2 Factor Prices and Rents

Before land acquisition takes place, the elite engage in agricultural production and after SEZs are created, they engage in non-agricultural manufacturing in the Special Economic Zones. From equation 2 we can see each elite will employ $n_a^i = n_a/e$ where $n_a = 1 - N_e$. Consequently, the production function for the elite before land acquisition can be written in per-capita terms as follows.

$$y^r = \psi f(l_i/n_a) \tag{5}$$

We derive factor prices in competitive and repressed labor markets both before and after land acquisition. This allows us to derive the rents appropriated by the elite before and after land acquisition. Using these rents, we calculate the *differential* rents that land acquisition would create for the elite. In competitive labor markets, wages equal the value of the marginal product of labor and are consequently higher than those under repressed labor-markets. The difference between the two wages would determine the rents accruing to the elite by virtue of their economic power. The demand for land acquisition for SEZs arises because the elite can appropriate higher rents by dispossessing small farmers.

There are two sources of this differential rent. First, (l_p) creates the wage floor for the elite. If they reduce wages below τ , the labor supply would fall to zero as small-farmers would not be willing to work for wages lower than what they earn through self-cultivation. However, after small farmers are dispossessed, the elite can lower wages further as workers no longer have land to undertake self-cultivation. Second, land acquired through ABD allows the elite to transition from agricultural to non-agricultural production which is associated with higher factor productivity and consequently, higher profits. More formally, the factor prices of land and labor before land acquisition under

²⁸The size of the rents will determine the contributions of the elite to collectively push for land acquisition.

competitive labor markets is as follows.²⁹

$$\frac{\partial Y^r}{\partial n_a} = w_{pre}^c = \psi \left[f\left(\frac{l_i}{n_a}\right) - \frac{1}{n_a} f'\left(\frac{l_i}{n_a}\right) \right] \quad (6)$$

$$\frac{\partial Y^r}{\partial l_e} = R_{pre}^c = \psi f'\left(\frac{l_e}{n_a}\right) \quad (7)$$

Where the superscript c refers to competitive labor markets. Next, we turn to repressive labor markets represented by the superscript m . In monopsonistic rural labor markets, many small farmers rely on a few large landowners who have *short-side power* in the labor market. Bowles (2009) argues that power is vested in the economic agent who is on the short-side of a non-clearing market. In this case, since p is large and l_p is very small then workers would depend heavily on wage employment from a few large employers. If small farms are not sufficient to sustain the families of small farmers, we can assume that $n_a = 1$.³⁰

In this case, the employers (e) will be able to exercise market power to keep wages depressed. The level of wage repression depends upon the fall-back position of workers (τ). For instance, let us assume that employers are willing to pay a small increment over and above the fallback position of workers such that the total wage is $\tau + \epsilon$. Since some workers are always rationed out of repressive labor markets, they would be willing to accept a lower wage in order to get employed. This would exert a downward pressure on wages and labor markets would clear only when workers are indifferent between working for the elite or under self-cultivation. More formally,

$$w_{pre}^m = \tau \quad (8)$$

Correspondingly, the rate of return on land is the difference between the output per unit of land and the wage rate prevailing in the repressive labor market. More formally,

$$R_{pre}^m = \frac{\psi f(l_e) - \tau}{l_e} \quad (9)$$

²⁹In a perfectly competitive market, employers will hire workers upto the point where wages equal their marginal product and since the production function is linearly homogeneous, the marginal products can be expressed in terms of a single factor (land per unit of labor).

$$\begin{aligned} Y^r &= \psi F(l_{i \in r}, n_a^i) \\ Y^r &= n_a \psi f(l_i/n_a) \\ MP_{n_a} &= \frac{\partial Y^r}{\partial n_a} \quad \text{and} \quad MP_{l_e} = \frac{\partial Y^r}{\partial l_e} \end{aligned}$$

³⁰This implies that the main worker in the household spends all of her time working as a wage worker. Other members of the household may be engaged in self-cultivation on small family owned farms.

Where w_{pre}^m is the wage rate that would prevail under repressive labor market conditions and R_{pre}^m is the return on per-unit of land (l_e) owned by the elite.

Next, we turn to factor prices that will prevail after land acquisition. Assuming that the elite have won the political contest and small farmers have been dispossessed of their land. Implying, $l^p \rightarrow 0$ and small-farmers are converted to wage workers. Further, the elite have transformed from being large agricultural producers to non-agricultural producers. Since workers no longer engage in any cultivation $Y^p = 0$, we assume that their wages now have a lower bound defined by the legal minimum wage w^g such that,³¹

Assumption 2: $w_{pre}^c > \tau (= w_{post}^c) > w^g$. For labor markets to clear, we assume that the legal minimum wages are lower than the productivity of self-farming and all private employment.

We repeat the above exercise to calculate post-land acquisition factor prices that would prevail under competitive and repressive labor markets respectively.

$$w_{post}^c = \phi \left[f\left(\frac{L}{n_a}\right) - \frac{1}{n_a} f'\left(\frac{L}{n_a}\right) \right] \quad (10)$$

$$R_{post}^c = \phi f'\left(\frac{L}{n_a}\right) \quad (11)$$

Where, w_{post}^c is the wage rate that would prevail under competitive labor market conditions and R_{post}^c is the return on per unit of new land holding of an elite (L) after land acquisition. We assume that all the land acquired from small-farmers is divided equally between all elite so that each elite gets pl_p/e additional land. Therefore, $L = l_e + pl_p/e$. Finally, factor prices under repressive labor markets can be formally presented as follows.

$$w_{post}^m = w^g \quad (12)$$

$$R_{post}^m = \frac{\phi f(L) - w^g}{L} \quad (13)$$

Where w_{post}^m is the wage rate that would prevail under repressive labor market conditions, R_{post}^m is the return on per-unit of land (L) owned by the elite and w^g is the legal minimum wage that the elite have to pay the workers.

The above exposition shows that both before and after land acquisition, the elite appropriate rents using their economic power. However, the rents in the latter case are greater so they have to spend resources to politically bargain for these increased rents. The differential rents are described

³¹This could be the wage earned through participation in public employment programs NREGA.

in the next section.

4.3 Source of Conflict: Rents

We know that monopsonistic labor markets depress wages below the competitive market levels implying, $w_{pre}^c > w_{pre}^m$ and correspondingly, $R_{pre}^m > R_{pre}^c$. We now define rents from labor repression before land acquisition as $\Delta R_{pre} \equiv R_{pre}^m - R_{pre}^c$.

$$\Delta R_{pre} = \frac{\psi f(l_e) - \tau}{l_e} - \psi f'(l_e) > 0 \quad (14)$$

Likewise, using **Assumption 2** we can write the rents post land acquisition as $\Delta R_{post} \equiv R_{post}^m - R_{post}^c$

$$\Delta R_{post} = \frac{\phi f(L) - w^g}{L} - \phi f'(L) > 0 \quad (15)$$

Since $\phi > \psi$ and using assumptions 1 and 2, we can see that $\Delta R_{post} > \Delta R_{pre}$. We define **differential rents** \bar{R} gained by the elite if they succeed in acquiring the land owned by small-farmers as follows.

$$\bar{R} \equiv \Delta R_{post} - \Delta R_{pre} \quad (16)$$

Equation 16 presents the gain that accumulation by dispossession will accrue to the elite.³² Both changes in the composition of the rural labor force and higher productivity associated with non-agricultural production contribute to the rents appropriated by the elite through land acquisition. We now turn to the political contest between small farmers and the elite which will determine whether land acquisition actually takes place and the rents retained by the elite after investing in the political contest.

4.4 Political Power in Participatory Democracies

Small-farmers may be reluctant to part with their land due to several factors. First, land provides a means for subsistence for small farmers and their families. As seen above, it is also a source of bargaining power for small farmers in repressive labor markets. Second, agricultural land is generally passed down generations so selling of land may involve taking consent from multiple stakeholders. In several cases, land markets may not exist and traditional rules may apply to landholding.³³ Finally, landownership may be a measure of social prestige and farmers may be reluctant to part with it for social and cultural reasons. In light of these factors, the elite cannot buy land belonging to small farmers in open market transactions as farmers may be unwilling to part with their land. Therefore,

³²The rents defined above are Pareto rents, which constitute returns to factors in excess of their marginal productivity or opportunity cost (Pareto, 1964). Alternatively, in the classical tradition, rents are defined as the proportion of national income accruing to owners of non-reproducible resources (Basu, 2018).

³³Agricultural land is related to farmers prestige and land markets in rural India are thin. Farmers sell land to pay off debts or arrange finances for weddings and bereavements Levien (2011b).

the elite would need legislative coercion to force small farmers to part with their landholdings. However, in democratic societies where small farmers are in electoral majority, this legislative coercion would require investments by the elite.

In order to induce elected governments to provide legality to land acquisition, the elite have to spend resources lobbying, providing kick-backs to political parties and mobilizing public opinion towards their cause etc. In democratic decision-making, the elite need to create a narrative of economic development that convinces voters and policy-makers that transfer of land from small-farmers to the elite is necessary for economic development. The ability to spend resources towards these goals is the source of political power of the elites in democracies.

Resources necessary to strengthen the political power of the elite depend upon the level of political competition in society. If there are several political parties, then the electorate is divided on several issues and elite have to spend *less* to ensure that candidates willing to support their policies win elections. Since voting behavior depends on several factors, high political competition allows the elite to focus on issues of caste and identity to dilute the electoral consequences of land acquisition policies.³⁴ On the other hand, if elections are closely contested between fewer contestants, the question of land acquisition which affects a large section of the population would remain in focus.

In addition to the resources spent, the political power of the elite also depends upon the economic inequality in society which is a source of their economic power. Inequality of wealth and assets create a divergence in the interests of social groups and attenuates the possibilities of cooperation (Banerjee and Iyer, 2005) which is necessary for successful collective action against land acquisition. Therefore, as inequality in land ownership increases, the political power of the elite increases autonomously without them investing a part of their rents. This economic inequality is the basis of the *de facto* power of the elite in the economy. More formally, the political power of the elite can be expressed as follows.

$$P^r = (\sigma) \sum_{i \in e} \alpha_i \bar{R} + \rho \delta \quad (17)$$

Where the degree of political competition in the economy is $\sigma \in [0, 1]$. As political competition increases ($\sigma \rightarrow 1$), the power of the elite increases. Next, $\alpha \in [0, 1]$ is the proportion of the rents (\bar{R}) that each elite would spend in political lobbying to support their demands for land acquisition. Finally, δ is a measure of land inequality (Gini coefficient) in the economy. A higher δ means higher land inequality and greater economic power of the elite which increases their political power as well since $\rho > 0$.

In participatory democracies where each individual has an equal vote, small farmers have *de jure* political power to induce policy choices which favor their class interest. According to the

³⁴Elections are contested on multiple issues like the economy, religion and identity. Roemer (1998) argues that even if one of the issues deciding voter preferences is non-economic such as caste or religion, then pro-poor parties will be forced to drop demands for progressive policies to maximize their support base even when the median voter is poor.

Median-Voter Theorem (MVT), policy choices that are preferred by the median voter get enacted in political democracies (Meltzer and Richard, 1981). If the economy is characterized by high inequality the income distribution will be skewed to the left and the small farmer will be the median-voter. Therefore, land acquisition policies which harm their class interests would not be enacted. However, this assumes that that voter preferences are determined solely on the question of land ownership (single peaked).³⁵ If other issues are also relevant in determining voting choices, then the *de jure* political power of small farmers would be weakened. Factors like hierarchies of caste and religion weaken this power. Therefore, the *effective* political power of $(1 - \gamma)$ small farmers is defined as follows.

$$P^s = (1 - \gamma)(1 - h)(1 - k) \tag{18}$$

The parameters h and k determine the power of small-farmers in the following way. First, following Banerjee and Somanathan (2007), we define h as a measure of social heterogeneity given by the following.

$$h = 1 - \sum_1^n v_j^2 \tag{19}$$

Where v_j refers to the population share of the j^{th} group in a population with n different caste or religious groups. The source of political power of small-farmers in democracies is their population proportion. However, caste and religious fragmentation dilutes this power and consequently we include $(1 - h)$ in the expression for small farmer’s *effective* power.

Second, k is a proportion of small-farmers who may decide to favor land acquisition. This could be due to several factors. First, some small farms may expect that that land acquisition by the elite would allow them to sell their small plots of land at higher rates which will help them transition out of agriculture. Others, mainly educated youth; may welcome industrial activity in the region as it may create formal sector employment for them. Finally, land acquisition may break the traditional caste based occupational structure in the Indian countryside so may be preferred by lower caste voters (Levien, 2012). Therefore, the political power arising out of larger proportion of small-farmers $(1 - \gamma)$ is reduced by a fraction $(1 - k)$ in equation 18 above.

We now discuss how the elite strengthen their political power in light of the *effective* political power of small-farmers in the next section.

³⁵Voter preferences are single-peaked with respect to a policy if the individual has a preferred policy. Therefore, the farther away the government’s policy choice is from this preferred point, the less the person prefers it and is unlikely to vote for it (Acemoglu and Robinson, 2005).

4.5 Political Contest over ABD

Having described the rents that the elite can appropriate through land acquisition and the source of their political power P^r , we now discuss their optimization strategy. We have assumed that even before dispossessing small-farmers of their land, the elite enjoy short-side power in the economy. Therefore, they now decide how much of their anticipated rent from ABD (α) should they invest in strengthening their political power to force land acquisition legislations. Given the symmetric nature of the game, each elite will choose the same contribution α . Therefore, the elite will have political power if the following condition holds.

$$\begin{aligned} P^r &\geq P^s \\ \sigma e\alpha\bar{R} + \rho\delta &\geq (1 - \gamma)(1 - h)(1 - k) \end{aligned} \tag{20}$$

Equation 20 simply states that the elite will choose to invest a proportion of their rents α such that their political power would exceed the *effective* political power of small-farmers. Assuming ω is the rate at which future income is discounted, the net present value of lifetime utility of a representative elite can be written recursively using Bellman's equation as follows.³⁶

$$V(ABD|\alpha)_t = (1 - \alpha)\bar{R} + \omega V(ABD|\alpha)_{t+1}$$

Where $V(ABD|\alpha)$ is the utility associated with participating in the political conflict for ABD and $(1 - \alpha)$ is the proportion of the differential rents \bar{R} that the elite retain after spending α in the political contest. Since the utility associated with each period is $V(ABD|\alpha)_t$, the optimization problem of the elite can be written using equation 20 as follows.

$$\begin{aligned} V(ABD|\alpha) = \underset{\alpha}{\text{minimize}} \quad & \left\{ \frac{(1 - \alpha)\bar{R}}{1 - \omega} \right\} \\ \text{subject to} \quad & (\sigma)e\alpha\bar{R} + \rho\delta \geq (1 - \gamma)(1 - h)(1 - k) \end{aligned}$$

Where, $(1 - \alpha)\bar{R}$ is the residual rents that every elite retains after accumulation by dispossession. The optimization problem simply states that the elite will choose the lowest α such that their political power would exceed the *effective* political power of small farmers according to equation 20. Assuming that the constraint is satisfied as an inequality, and using the complementary slackness associated with the minimization problem in Kuhn-Tucker forms using (Chiang (1984), page 410). We can derive the equilibrium value α^* as follows.³⁷

³⁶Bellman's equation expresses the lifetime utility as a combination of that period's income (flow payoff) and a discounted continuation payoff (future utility).

³⁷See appendix for detailed solution of the optimization problem.

$$\alpha^* = \frac{(1 - \gamma)(1 - h)(1 - k) - \rho\delta}{(\sigma)e\bar{R}}$$

This completes the formalization of the model. We now discuss the conditions under which the elite would increase their investment in order to acquire political power to get land acquisition legislation adopted in democracies.

Proposition 1: *Social and economic inequalities reduce the de jure political power of small farmers and consequently, increases the possibility of land acquisition by decreases the contributions necessary for the elite to win the political contest.*

The intuition behind this proposition is as follows. As economic and social inequality (δ) and (h) rises, the ability of small-farmers to solve their collective action problem to protect their land-ownership would decline and correspondingly their *effective* political power also declines. Therefore, the necessary contributions by the elite to overcome political opposition from small-farmers would reduce. For instance, [Banerjee and Somanathan \(2007\)](#) show that increased social fragmentation reduces the provision of public goods in India. Likewise, we argue that social hierarchies create different interest groups within society and reduces the political power of small-farmers.

Second, land inequality determines the economic power of the elite which is a source of their *de facto* political power. Consequently, an increase in economic inequality would reduce the investment by the elite in creating consensus around land acquisition as their class interests already dominate political decision-making. This is because, economic power allows the elite influence popular opinion by owning media outlets etc. Additionally, large landowning elites may also control state legislatures and can safeguard their class interests by co-opting the political system.

More formally,

$$\frac{\partial \alpha}{\partial \delta} < 0 \quad \text{and} \quad \frac{\partial \alpha}{\partial h} < 0$$

Proposition 2: *As the proportion of small-farmers who favor land acquisition k rises, the contribution of the elite declines.*

This proposition states that as the proportion of small-farmers who expect to gain formal employment in the non-agricultural sector increases, the case for land acquisition would be strengthened in the political discourse of the society. Therefore, the proportion of rents necessary to provide political legitimacy to land acquisition would reduce. k may depend on demographic characteristics like educational level of small-farmers. Educated farmers may expect to find gainful employment in SEZs and may favor land acquisition. Alternatively, k may depend upon the profitability associated with agriculture. If small-farmers feel that incomes in agriculture are stagnating and land acquisition would transform their employment opportunities, then the case to protect small farmers land becomes weak which would reduce their *effective* political power by fraction of small farmers k

who may support the economic agenda of land acquisition espoused by the elite. This implies that $\frac{\partial \alpha}{\partial k} < 0$.

Proposition 3: *As the degree of political competition in the economy rises, the proportions of rents necessary to win the political contest (σ) with small-farmers would decrease and land acquisition efforts would succeed.*

The intuition behind this proposition comes from two factors. First, as mentioned above, if there is greater political competition in the economy, the elite will have to invest less in order to enact policies that favor dispossession. Under the first-past-the-post system, the party with most votes win. If there are several parties contesting elections, the winning party needs a smaller fraction of votes to win elections. Therefore, in this scenario, the contribution by the elites would fall if there is greater political competition. This would ensure that no political party can devise a strategy to oppose land acquisition and win elections by mobilizing small-farmers on the land question. Second, as political competition increases, issues of identity and caste dominate and reduce the *de jure* power of the voters. Therefore, $\frac{\partial \alpha}{\partial \sigma} > 0$.

Therefore, we see that the paradoxical political legitimacy acquired by the elite for accumulation by dispossession is a result of social and economic inequalities in society and the ability of the elite to spend resources to mobilize political support for their cause. Further, different interest groups within small farmers may also dilute their *effective* political power.

In order to derive these results, we have simplified the analysis in various ways. First, we have limited our analysis to the two class case of the elite and small farmers and we have assumed that all small farmers lose their land while the land belonging to the elite stays intact. These assumptions are certainly guided by the principle of simplifying the analysis and relaxing these would not significantly alter the major conclusions suggested by the model. For instance, it can be argued that some small farmers continue to retain their land even after SEZs. In this case, the the proportion of farmers not treated by SEZs may prefer SEZs in the district as it increases the employment opportunities for their families. The effect of such an addition would be similar to that of the parameter k defined in equation 18. Likewise introducing a separate category of urban capitalists does not enrich the discussion in any way as these urban capitalists would face the same production functions and constraints as the rural elite after land acquisition described in equation 2.

5 Data

In this section, we test the implications of the model presented in section 4. We first create a measure of the probability of success of farmer movements using data on SEZs that were not approved. Next we test whether factors like land inequality, social fragmentation and political competition can impact the success of farmer agitations against SEZs.

5.1 Success of farmer Agitation against Land Acquisition

In order to test the propositions of the model, this paper constructs a measure of the success of farmer movements in protecting their land against acquisition using a new data set on farmer agitations and SEZ approvals. This data comprises information about whether land acquisition efforts by capitalists were stalled by successful farmer agitations. Information on SEZs that were not formally approved due to farmer protests is collected by studying the minutes of the SEZ Board of Approval. These minutes provide detailed information about SEZ proposals which failed to acquire land for setting up of SEZs. This information is then verified by answers to parliamentary questions and newspaper reports. Between 2006 - 2010, several questions about SEZs, land acquisition and farmer movements were asked in the Rajya Sabha (Upper House) of the Indian Parliament. In response to these questions, the Ministry of Commerce gave detailed replies about the status of various SEZ projects, negotiations with farmers on land prices and land acquisition rules. In some cases these answered included full lists of SEZs approved and notified. This allows us to verify the information from the BoA minutes.

Since farmer movements were intense, several farmer struggles to protect their lands were reported in the national and regional news. Further, business news also commented extensively on the slow progress in land acquisition, corruption, use of violence for land acquisition and litigation slowing the pace of SEZ development. These sources allowed us to identify 221 proposals in 88 districts across the country where SEZ developers failed to acquire land due to farmer agitations. These are presented in Figure 2. Using data on SEZs that fail to get formal approval and those that managed to get approval, we construct a measure of the success of farmer movements in protecting their land against acquisition by large capital as follows.

$$FS = Pr(\text{Farmer agitation succeeding}) = \frac{\text{Number. of SEZs not approved in a district}}{\text{Total SEZ proposals in the district}} \quad (21)$$

where total SEZs in a district comprises of the sum of SEZ projects that failed to acquire land and those that were successful in dispossessing farmers. Therefore, the fraction *Farmer Success* (FS) is the probability of farmers succeeding in protecting their land against ABD. Figure 3 provides average values of FS by state. We can see that for most northern and eastern states of Punjab, West Bengal and Odisha, which are primarily agricultural states, farmer movements have been highly successful and the ratio of un-approved SEZs to total SEZs is greater than 0.5. On the other hand, ABD attempts by the state for setting up SEZs were more successful in the industrialized southern states of Andhra Pradesh, Kerala, Tamil Nadu and Karnataka.³⁸

³⁸Even though these states are more industrialized than the states in the north, these states have a high proportion of labor force engaged in agriculture. In states like Maharashtra, Andhra Pradesh, Gujarat and Karnataka the proportion of rural population engaged in agriculture is above 70 percent while the national average is 64 percent in 2011-2012. At 77 percent, Maharashtra has one of the highest proportions of rural labor force in agriculture in India [National Sample Survey Office \(2013\)](#).

A Measure of Land Inequality

The 61st Employment and Unemployment Round of the National Sample Survey (NSS) data provides detailed information on the land-owned and cultivated by farmers in 2004-2005 before SEZs Act was enacted. The ‘thick round’ of NSS is the nationally representative sample survey data collected every five years. The average sample size of this data is 120,000 households. We use this to construct district-level Gini-coefficients for land-ownership.³⁹ In order to calculate inequality of land ownership we use 11 classes of landownership - landless workers, below 0.5 ha; 0.5-1 ha; 1-2 ha; 2-3 ha; 3-4 ha; 4-5 ha; 5-7.5 ha; 7.5-10 ha; 10-20 ha; 20 ha above based on the categories mentioned in the Agricultural Census of India. We also include landless farmers in our calculations similar to [Banerjee and Somanathan \(2007\)](#). The mean value for state-level inequality in land-ownership is 0.53.⁴⁰

5.2 Measure of Caste and Religious Fragmentation

The 61st Employment and Unemployment Round of NSS data corresponding to 2004-2005 provides information on four major castes and all major religions of India. We use the NSS data to construct a measure of social heterogeneity described in Equation 19. The NSS classifies individuals as Scheduled Castes (SC), Scheduled Tribes (ST), Other Backward Tribes (OBC) and general categories. In addition, the NSS data is dis-aggregated by to include the following religions - Hindus, Muslims, Christians, Jains, Sikhs and Zoroastrians. We use the NSS data as opposed to the Census to create our index of social fragmentation as the Census does not provide information on religions and only provides a break-up of the Scheduled Castes (SC) and Scheduled Tribes (ST). The sampling weights given in the NSS allow us to calculate population means for different social groups at the district level. We use these district averages to calculate state-level means for our measure of social fragmentation. We classify each caste within Hindus as a separate group and each of the other religions are classified as a separate group following [Banerjee and Somanathan \(2007\)](#). The mean value of our measure of social heterogeneity is 0.63 since we are only considering four major sub-groups in Hindu society.⁴¹

A Measure of Political Competition

Using data published by the Election Commission of India on constituency-wise vote shares in the election to the Parliament in 2004 we create a measure of political competition in a district (σ) according to equation 17. In order to construct our measure of political competition, we match each district where an SEZ was proposed in the parliamentary constituency. In most cases, a

³⁹We use the NSS to calculate the Gini-coefficients as opposed to the quinquennial Agricultural Census of India since the former provides information on landholding patterns for all districts in the country. The state of Maharashtra is missing in the 2005 Agricultural Census and several districts of West Bengal, Karnataka and Uttar Pradesh are also missing.

⁴⁰Our estimates of land inequality using NSS data are comparable to [Li \(2017\)](#) who uses the Agricultural Census of India for calculating the Gini Coefficient.

⁴¹[Banerjee et al. \(2007\)](#) shows that if sub-castes are included in the calculation of social-heterogeneity, the index of social fragmentation is around 0.9 in 1971.

district corresponds to a single constituency. Since parliamentary constituencies are determined by population, in some cases like Mumbai and Chennai, there are several constituencies within a district. In these cases, we dropped these districts from our sample because these are primarily urban districts and SEZ proposals in these districts do not require land acquisition by farmers on a large scale. Alternatively, in other cases, several small districts are clustered into one constituency. In order to map these constituencies, we trace the location of the SEZ to the sub-district level and use the parliamentary constituency that contains the block or sub-district where the SEZ was proposed. We construct our measure of political competition described in equation below.

$$\sigma = 1 - \sum_1^n p_j^2$$

where p is the share of votes received by each political party j and n is the total number of political parties contesting elections. σ presents the degree of political competition measured by the number of candidates contesting from each Parliamentary constituency. The mean value of σ in our data is 0.6 which shows that elections are highly contested in India.

5.3 Summary Statistics

In addition to socio-economic inequality and political competition, we also test for the role of literacy, proportion of marginalized communities and the proportion of cultivators in strengthening farmer agitations. Demographic data on these is calculated from the Census of India 2001. Table 2 provides the mean values for the major determinants of farmer agitations discussed in this paper. These include - land inequality, social fragmentation, political competition and demographic characteristics like literacy rates, proportion of cultivators and SC/ST population.

Using the data set on farmer agitations and SEZ approvals, we find that 221 projects did not succeed while 340 SEZ proposals were approved in 88 districts as shown in Table 1. The small number of districts in our sample do not allow us to undertake causal analysis of the factors that determine successful resistance of land acquisition, we show the relationship between socio-economic factors listed above the success of farmer agitations (FS). In order to test for these correlations, we control for population, agricultural incomes, fraction of land irrigated and other factors that may influence the relationship between socio-economic inequalities and farmer agitations. These mean values of these controls and their sources are mentioned in Panel B of Table 2.

6 Evidence

In this section we test the propositions of the model presented in Section 4. Farmer protests against land acquisition are primarily influenced by local factors at the village or panchayat level. However, data for socio-economic inequality and demographic composition is not available at the sub-district

level so we construct a measure of success of farmer agitations FS at the district-level which is defined in equation 21 above.

6.1 Socio-economic Inequality

The first proposition of the model states that inequality in land ownership and hierarchies of caste and religion reduce the *de jure* political power of farmers. High inequality impedes collective action efforts by farmers since it creates a divergence between the interests of different farmers. For instance, large farmers may decide to support land acquisition as they may benefit from rising real-estate prices and transition from agricultural producers to property developers as shown by [Levien \(2011b\)](#). [Olson \(2009\)](#) argued that collective action efforts cannot succeed as self-interested individuals would not contribute to collective action efforts but attempt to benefit from the provision of the public good. However, [Ostrom \(2000\)](#) shows that factors like trust, fairness and reciprocity can contribute to successful collective action efforts. [Bisung et al. \(2014\)](#) argues that factors like relations of power, inequality, gender relations, community conflicts and social status impact people's participation in collective action efforts. Therefore, socio-economic inequality is an important determinant of collective action by farmers to protect their land from ABD efforts by the state. High inequality impacts social trust and the notion of fairness in the compensation received by small farmers. [Figure 4](#) shows that the fraction of SEZ proposals that do fail to acquire land or the probability of farmers successfully resisting ABD efforts is negatively correlated with land inequality when we control for district-level factors.

Apart from land inequality, another determinant of successful collective action efforts by farmers to protect their land is the proportion of cultivators or land-owners in a district. If a greater proportion of the population owns land then mobilizing them against land acquisition is easier. Further, landless workers may benefit from manufacturing and construction jobs offered by SEZs so may support the establishment of export processing zones. However, land-owning farmers may be more averse to ABD policies. A higher proportion of cultivators or self-farmers would create common interests and create unite farmers to protest against land acquisition policies. [Figure 5](#) shows that the proportion of cultivators is strongly correlated with the probability of farmer agitations succeeding. This is consistent with existing literature. For instance, [Fischer and Qaim \(2012\)](#) shows that banana farmers in Kenya decide joining collective marketing organizations depends on the cost-benefit calculations by small farmers. Similarly, decisions by farmers to contribute to collective action against land acquisition depend on their landownership status.

The other determinants of social fragmentation in the Indian context are caste and religion. [Figure 6](#) shows the relationship between the probability of farmer movements succeeding and the measure of social fragmentation defined in [Equation 19](#). As predicted by the model, social heterogeneity of caste and religion negatively impact farmer agitations. Caste and religion based differences reduce social cohesion and reduces the 'trust' and the notion of 'fairness' in society which adversely

impacts collective action efforts. [Alesina et al. \(1999\)](#) finds that ethnic heterogeneity in the US reduces the provision of public goods. [Khwaja \(2009\)](#) finds village-level heterogeneity in Pakistan to be negatively correlated with communal maintenance of public goods in the village. Therefore, economic inequality of land-ownership and social heterogeneity along caste and religion lines adversely impact collective action efforts by farmers. These findings are consistent with empirical literature that show land inequality and social fragmentation impeding collective action efforts by agrarian communities ([Dayton-Johnson, 2000](#)).

6.2 Political Competition

Another major determinant of farmer agitations is the degree of political competition in the district. Political competition determines the responsiveness of the political elite to the demands of farmers. [Roemer \(1998\)](#) shows that if extra-economic issues like social identity or religion determine voting choices then demands for economic justice for the poor would remain unfulfilled even when the poor are electorally in majority.

India has a multi-party system where several political parties contest elections and appeal for votes based on various issues like religion, caste based social justice and economic well-being. Elections in India are very competitive, in 48 elections held during 1989 - 1999, three-fourths of sitting governments at the state and national level were rejected by the electorate ([Kumar, 2004](#)). Caste plays a major role in determining voting behavior in India which impacts the decision-making of public representatives. Research shows that ethnic determinants of voting in India decrease the quality of candidates. For instance, ethnic bias in voting leads to the selection of candidates with criminal records ([Banerjee and Pande, 2007](#)) and is associated with higher levels of corruption by elected representatives ([Acharya et al., 2015](#)).

Figure 7 shows that political competition is negatively related to FS . Therefore, as the number of political parties contesting elections rise, elections are contested on several issues and the probability of farmers uniting on the issue of land acquisition decreases. States like Odisha and West Bengal which have been under the control of one party for several years have witnessed some of the most sustained resistance against land acquisition. On the other hand, political parties in Uttar Pradesh, where politics has centered around caste lines have been less than sensitive to solve farmer disputes and ensure fair compensation for dispossessed farmers ([Pai, 2011](#)). With several political parties competing elections, the winning party does not necessarily need the support of the majority but simply relies on the support of a few dominant caste groups to win elections. This reduces the *de jure* political power of farmers and renders farmer agitations against land acquisitions ineffective. However, if there are fewer parties contesting elections, then farmer issues become important owing to their electoral majority.⁴²

⁴²The negative relationship between political competition and powerful farmer agitations could also be driven by the fact that lack of competition allows the political elite to adopt policies favoring ABD without fearing electoral

6.3 Literacy Rates and the Proportion of Marginalized Communities

It is generally argued that SEZs contribute to local economic development by creating employment opportunities for workers in the region. [Aggarwal \(2007\)](#) argues that SEZs offer remunerative employment and job security to workers. Further, the rural economy in India has rigid caste hierarchies where individuals belonging to marginalized communities face caste based discrimination. Following [Srinivas and Marriot \(1955\)](#), a number of researchers have found that caste identity plays an important role in determining people's access to public goods, their ability to engage profitably in trade and to raise capital through collateral ([Banerjee and Somanathan, 2007](#); [Anderson, 2011](#); [Verma, 1991](#); [Dreze et al., 1999](#)). For instance, [Basole and Basu \(2011\)](#) find that the Scheduled Castes in India have remained predominantly landless since the 1960s. Therefore, educated workers and marginalized communities in the village economy would benefit from new employment opportunities created by SEZs. Consequently, these groups may decide to not participate in collective action efforts by farmers to protect their land.

Figure 8 shows that there is a weak correlation between FS and literacy rates when we control for district level demographic factors. This suggests that farmers do not anticipate to benefit from employment generation under SEZs. [Banerjee-Guha \(2008\)](#) shows that over 60 percent of SEZs approved were proposed by Information Technology (IT) firms. These industries are not very labor intensive and primarily create high-skill employment. Therefore, local workers do not expect permanent employment from SEZs and therefore, oppose land acquisition.

The evidence on marginalized community participation is shown in figure 9. Paradoxically, there is a strong positive relationship between the probability of success or farmer agitations against land acquisitions and the proportion of marginalized communities in the population. This implies that the marginalized communities who face discrimination in the rural economy do not expect to gain from SEZs. The fact that marginalized communities continue to face discrimination in non-agricultural sectors of the economy has been established by several studies. [Deshpande \(2001\)](#) finds that over 72 percent of Scheduled Castes and Scheduled Tribes in rural India work in low-paying primary occupations like farming and fishing. The corresponding percentage for upper castes was only 55 percent. Thus, the probability of finding high-paying employment outside agriculture is much lower for marginalized communities than other sections of society. Correspondingly, SC and ST groups oppose land acquisition policies as they fear that these policies would deprive them of their sole means of subsistence.

consequences as voters have fewer alternatives. For instance, West Bengal and Odisha also witnessed the most brutal repression by the state governments. Data limitations do not allow us determine the factors driving the relationship between political competition and the success of farmer movements and future empirical research may help explain this relationship in detail.

7 Conclusion

This paper analyzes land acquisition for setting up of SEZs which facilitate capital accumulation by the elite by dispossessing farmers in electoral democracies. India's Special Economic Zones (SEZs) Act is an example of accumulation by dispossession (ABD) as it allows private companies to acquire rural land for setting up of industrial complexes, residential complexes and infrastructure projects. Changes in land-ownership to establish SEZs lead to an alienation of peasants and tenant farmers from agricultural land which creates a class of workers, divorced from the means of production and willing to work as wage workers for industry at low wages. Forceful land acquisition under policies like SEZs may be resisted by agrarian groups and their resistance may be consequential in democratic countries like India.

SEZs like all instances of accumulation by dispossession rely on the political legitimacy granted by the state. The ability of the capitalists to secure such political patronage depends on the institutions and laws favored by the political elite. These institutions are in turn, determined by the distribution of power in society and the success of different groups in mobilizing and enforcing their class interests. Using a simple model of the political conflict over land acquisition and our new data set on SEZs that failed to acquire land from farmers, this paper finds that factors like inequality in land ownership (class) and hierarchies of caste and gender hinder the ability of small and marginal farmers from protecting their class interests even though they have *de jure* political rights and majority in the voting process. Further, excessive political competition along caste and ethnic lines weakens the political power of farmers and reduces the probability of success of farmer movements. Finally, the promise of formal employment and higher wages does not convince marginalized communities or educated farmers to support SEZs.

This paper shows how the class interests of the elite may continue to dominate policy choices and implementation through coercive means even though small farmers have greater *de jure* political power in electoral democracies. This analysis discusses some factors that may help farmers mount successful and sustained collective resistance against the state to protect their land. Future research should explore the role of mass movements against exclusionary policies by the elite in developing countries.

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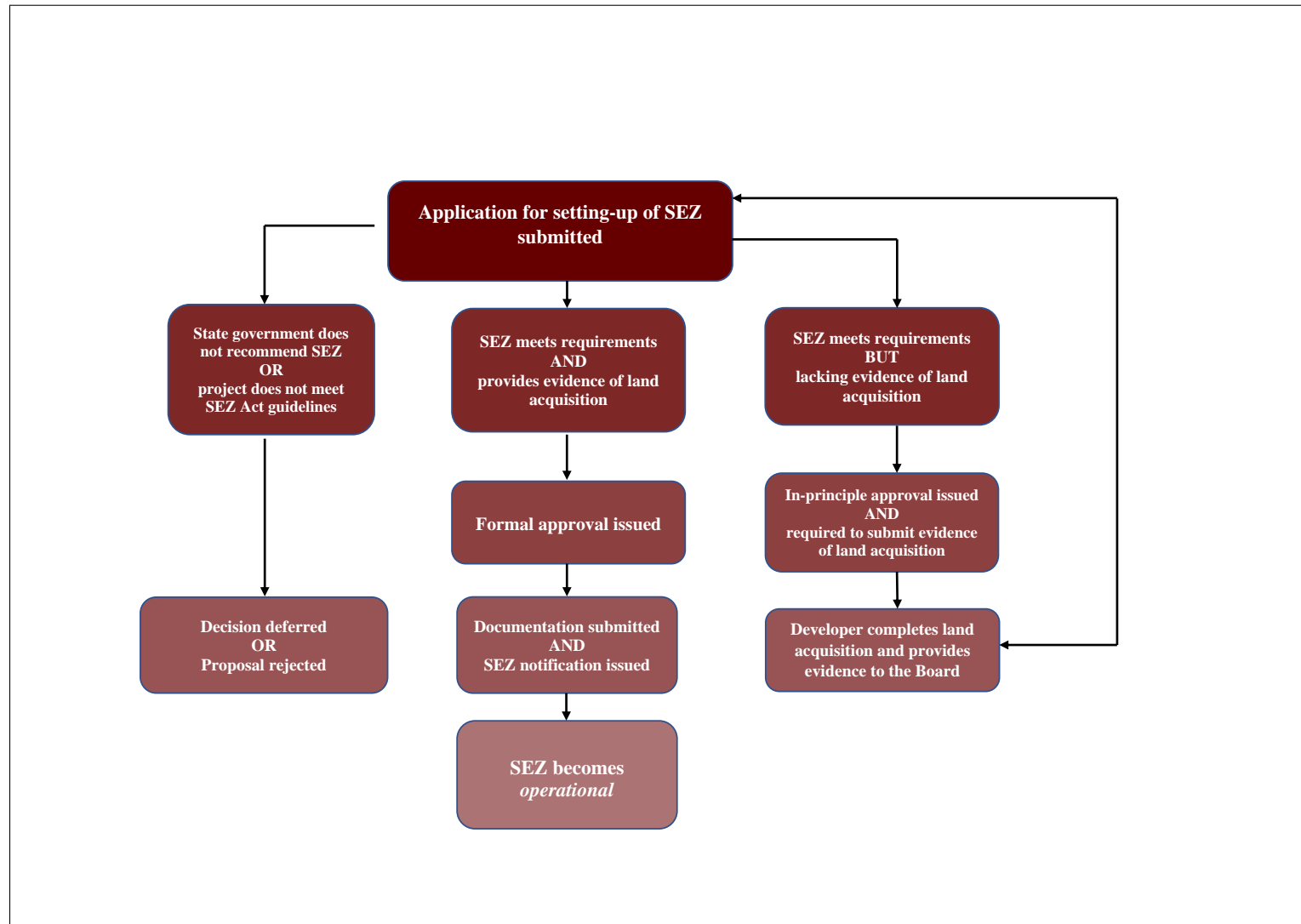
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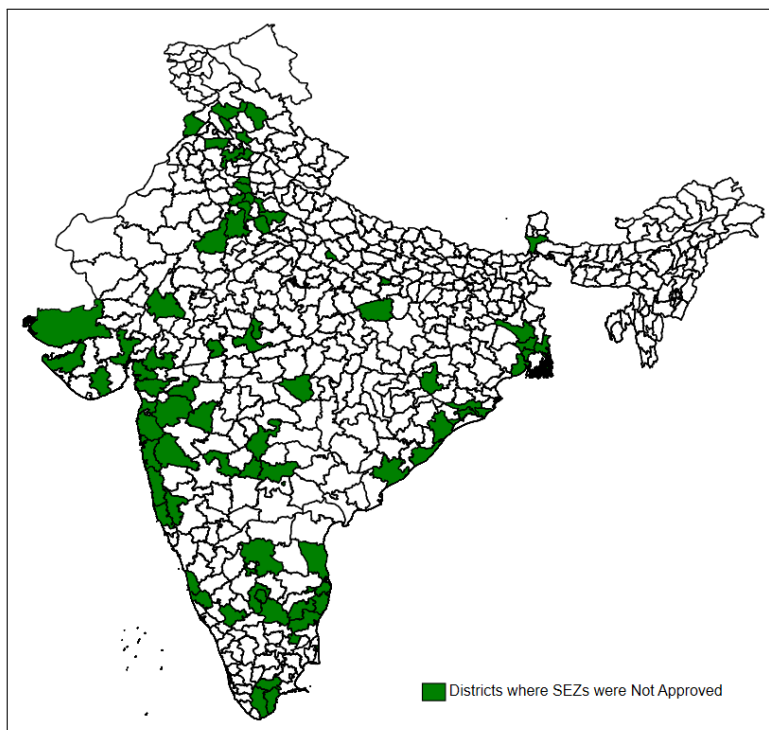
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Figure 1: Procedure for Setting up an SEZ



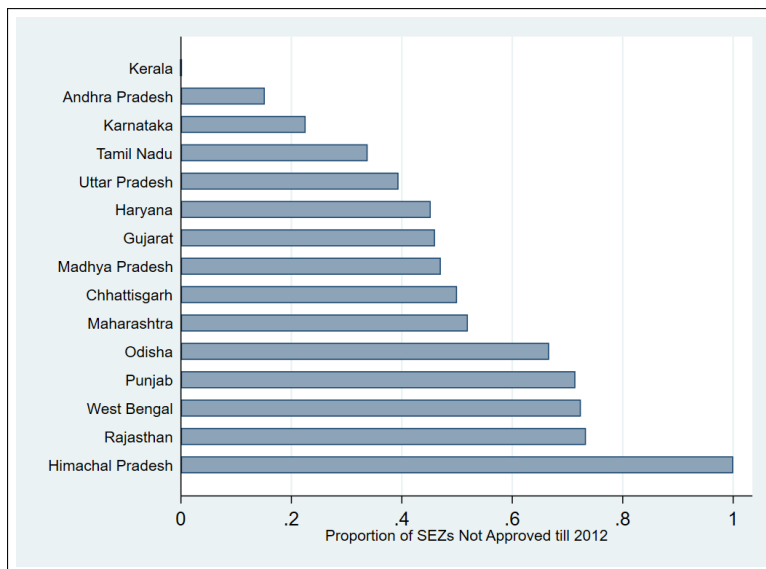
Note: This figure shows the procedure for setting up an SEZ based on the procedure laid down in the SEZ Act, 2005 and the minutes of the meetings conducted by the Board of Approval (BoA) of the Ministry of Commerce and Industry, Government of India.

Figure 2: Districts where SEZs were Not-Approved



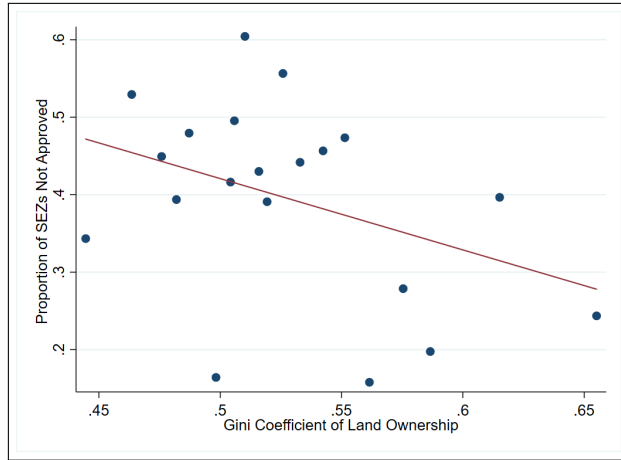
Source: Based on the minutes from the SEZ Board of Approval meetings, answers to parliamentary questions and newspaper articles.

Figure 3: Proportion of SEZs Not-Approved



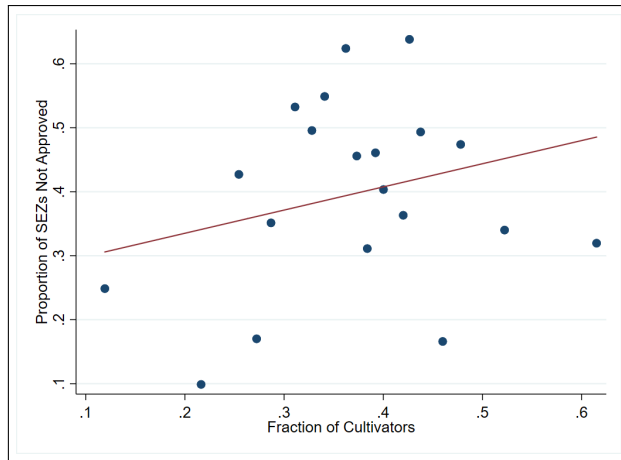
Note: Author's calculations using minutes from the SEZ Board of Approval meetings, answers to Parliamentary questions and newspaper articles.

Figure 4: Fraction of SEZ Proposals Not Approved and Land Inequality



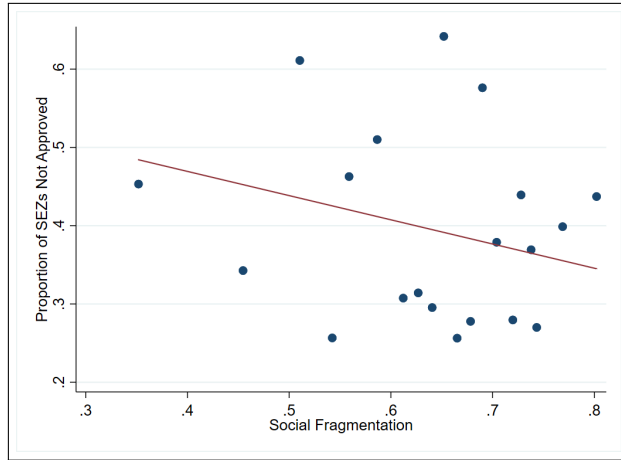
Note: Data on the fraction of SEZs in a state that were not approved is calculated using minutes from the SEZ Board of Approval meetings, answers to Parliamentary questions and newspaper articles. Data on the Gini coefficient of land holding is calculated using the National Sample Survey Organization 2004-05. This figure controls for the state-level factors mentioned in Table 2.

Figure 5: Fraction of SEZ Proposals Not Approved and the Proportion of Cultivators



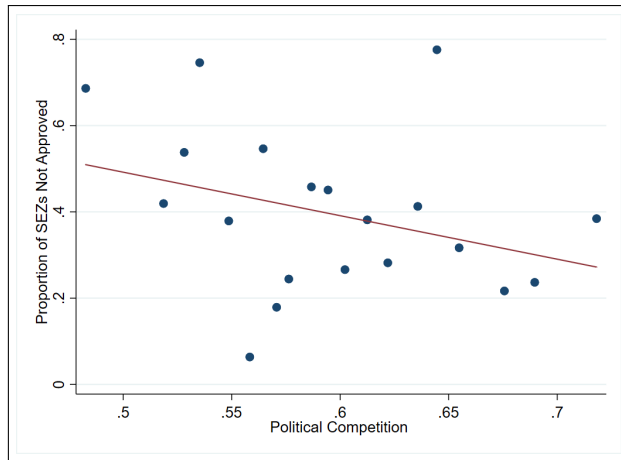
Note: Data on the fraction of SEZs in a state that were not approved is calculated using minutes from the SEZ Board of Approval meetings, answers to Parliamentary questions and newspaper articles. Fraction of Cultivators are calculated from the Census of India 2001. This figure controls for the state-level factors mentioned in Table 2.

Figure 6: Fraction of SEZ Proposals Not Approved and Social Fragmentation



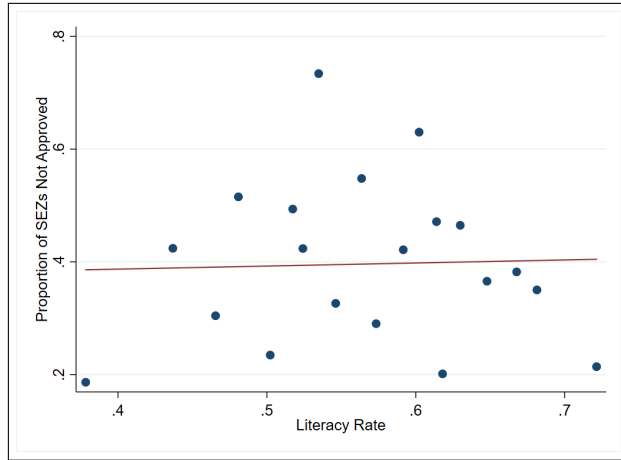
Note: Data on the fraction of SEZs in a state that were not approved is calculated using minutes from the SEZ Board of Approval meetings, answers to Parliamentary questions and newspaper articles. Data on social and religious fragmentation is calculated using the National Sample Survey Organization 2004-05. This figure controls for the state-level factors mentioned in Table 2.

Figure 7: Fraction of SEZ Proposals Not Approved and Political Competition



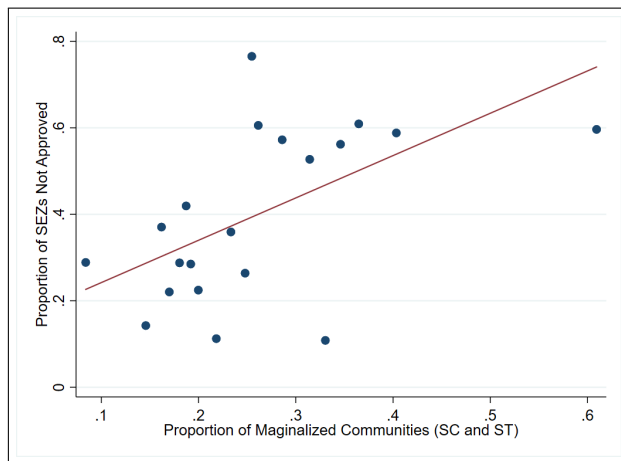
Note: Data on the fraction of SEZs in a state that were not approved is calculated using minutes from the SEZ Board of Approval meetings, answers to Parliamentary questions and newspaper articles. Data on political competition is calculated from the election data published by the Election Commission of India. This figure controls for the state-level factors mentioned in Table 2.

Figure 8: Fraction of SEZ Proposals Not Approved and Literacy Rate



Note: Data on the fraction of SEZs in a state that were not approved is calculated using minutes from the SEZ Board of Approval meetings, answers to Parliamentary questions and newspaper articles. Data on literacy rates is calculated from the Census of India 2001. This figure controls for the state-level factors mentioned in Table 2.

Figure 9: Fraction of SEZ Proposals Not Approved and Marginalized Communities



Note: Data on the fraction of SEZs in a state that were not approved is calculated using minutes from the SEZ Board of Approval meetings, answers to Parliamentary questions and newspaper articles. marginalized communities include the Scheduled Castes and Scheduled Tribes and are calculated from the Census of India 2001. This figure controls for the state-level factors mentioned in Table 2.

Table 1: Approval Status of SEZs by State (2006 – 2012)

State	Not Approved	Approved	Total
Andhra Pradesh	12	67	79
Chhattisgarh	3	3	6
Gujarat	23	27	50
Haryana	19	23	42
Himachal Pradesh	4	0	4
Karnataka	14	48	62
Kerala	0	28	28
Madhya Pradesh	8	9	17
Maharashtra	53	49	102
Odisha	6	3	9
Punjab	10	4	14
Rajasthan	11	4	15
Tamil Nadu	24	47	71
Uttar Pradesh	13	20	33
West Bengal	21	8	29
Total	221	340	561

Table 2: Summary statistics for the Determinants of Farmer Resistance against ABD

Variable	Mean	Minimum	Maximum
<i>Panel A: Determinants of Successful Farmer Agitations</i>			
Land Gini	0.53	0.43	0.70
Social Fragmentation	0.63	0.24	0.71
Political Competition	0.60	0.54	0.74
Proportion Literate	0.56	0.31	0.83
Proportion of SC and ST	0.28	0.10	0.42
Proportion of Cultivators	0.28	0.04	0.59
<i>Panel B: District Level Controls</i>			
Labor Force in Agriculture	0.17	0.018	0.33
Population Density	4.03	1.53	9.87
Fraction-Irrigated	0.45	0.14	0.95
Proportion of Population Below Poverty Line	0.19	0.06	0.89
Log of Agricultural Wage	1.58	0.79	2.06
Fraction of Non Agricultural Labor	0.08	0.2	0.19
Fraction of Non-Agricultural Business	0.096	0.02	0.18
Fraction Salaried Work	0.052	1.04	0.12

Note: Panels A and B of this table provide summary statistics for major determinants of successful farmer agitations against land acquisition and district-level controls respectively. Data on land inequality, social fragmentation, agricultural wages and fraction of work-force in non-agricultural work, agricultural business and salaried workers is calculated using the Employment and Unemployment Rounds of the National Sample Survey 2004-2005. Index of political competition is calculated using constituency level vote shares for the 2004 parliamentary elections provided by the Election Commission of India. Data on literacy rate, the proportion of marginalized communities, cultivators, labor force participation and population density is taken from the Census of India 2005. Finally, the proportion of population below the poverty line is calculated using the Consumption and Expenditure Survey of the National Sample Survey 2004-2005.

A Deriving the Equilibrium Level of Elite Contribution

The optimization problem for the elite can be written as follows.

$$V(ABD|\alpha) = \underset{\alpha}{\text{minimize}} \quad \left\{ \frac{(1-\alpha)\bar{R}}{1-\omega} \right\}$$

subject to $(1-\sigma)e\alpha\bar{R} + \rho\delta \geq (1-\gamma)(1-h)(1-k)$

The Kuhn-Tucker conditions associated with the minimization problem are as follows.

$$\begin{aligned} \frac{\partial V}{\partial \alpha} \geq 0; \quad \alpha \geq 0 \quad \text{and} \quad \alpha \frac{\partial V}{\partial \alpha} = 0 \\ \frac{\partial V}{\partial \lambda} \geq 0; \quad \lambda \geq 0 \quad \text{and} \quad \lambda \frac{\partial V}{\partial \lambda} = 0 \end{aligned} \tag{22}$$

We use the trial and error approach to find the solution for the maximization problem above. First it is assumed that $\alpha > 0$. Then using the complementary slackness condition (column 3) from equation 22 can be written as follows.

$$\begin{aligned} \frac{\partial V}{\partial \alpha} = 0 \\ -\frac{\bar{R}}{1-\omega} - \lambda [(1-\sigma)e\bar{R}] = 0 \\ \lambda = -\frac{1}{e(1-\omega)(1-\sigma)} < 0 \end{aligned} \tag{23}$$

Equation 23 leads to a contradiction as from equation 22, we know that $\lambda \geq 0$. Therefore, we now try the first-order condition w.r.t λ . Assuming, $\lambda > 0$, the complementary slackness condition from equation 22 gives us the following result.

$$\begin{aligned} \frac{\partial V}{\partial \lambda} = 0 \\ \alpha^* = \frac{(1-\gamma)(1-h)(1-k) - \rho\delta}{(1-\sigma)e\bar{R}} \end{aligned} \tag{24}$$

B Deriving Labor Demand post ABD

$$\begin{aligned} \pi(n_{na}) = \max_{n_{na}} \quad \{n_{na}\phi f(L/n_{na}) - \alpha^*\bar{R} - w^g n_{na}\} \\ \text{subject to} \quad (1-\alpha^*)\bar{R} \geq \Delta R_{pre} \end{aligned} \tag{25}$$

Assuming the above constraint is satisfied with an equality and using the Lagrangian λ , the FOCs,

$\frac{\partial \pi}{\partial n_{na}} = 0$ and $\frac{\partial \pi}{\partial \lambda} = 0$ can be written as follows.

$$\frac{\partial \pi}{\partial n_{na}} = \phi f(L/n_{na}) - \frac{\phi}{n_{na}} f'(L/n_{na}) - w^g = 0 \quad (26)$$

$$\frac{\partial \pi}{\partial \lambda} = \frac{\phi f(L/n_{na}) - w^g}{L} - \phi f'(L/n_{na}) = \left(\frac{2 - \alpha^*}{1 - \alpha^*} \right) \Delta R_{pre} \quad (27)$$

Where the left-hand side of equation 27 is the expression for ΔR_{post} from equation 14 and the right-hand side is expanding \bar{R} using equation 16. We can now substitute the value of $\frac{\phi}{n_{na}} f'(L/n_{na})$ from equation 26 in equation 27 and re-arrange the terms to solve for the equilibrium value of n_{na}^* .

$$n_{na}^* = \frac{1}{L \left\{ 1 + \left(\frac{2 - \alpha^*}{1 - \alpha^*} \right) \left[\frac{\Delta R_{pre}}{\phi f'(L/n_{na})} \right] \right\}} \quad (28)$$