

THE POLITICAL ECONOMY OF SPECIAL ECONOMIC ZONES

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DEDICATION

I dedicate this dissertation to my parents. Thank you for making me the person I am.

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This dissertation would not have come about without my excellent committee. I thank Tyler Cowen, my mentor and guide, for your patience, support, and encouragement. I could not have wished for a better advisor. Richard E. Wagner, thank you for teaching me how to develop ideas and how to write. Thank you Garrett Jones, for all your insights and invaluable advice as I pondered my ideas and obstacles.

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ABSTRACT

THE POLITICAL ECONOMY OF SPECIAL ECONOMIC ZONES

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Special economic zones (SEZs) are a wide-spread and increasingly popular tool for economic growth. Big or small, secluded or isolated, they are areas where a government allows for different rules to apply than the rest of the country. Most commonly, this means granting fiscal privileges to investors in the zones. Exemptions from taxes, tariffs, and sometimes regulations mean that SEZs form islands of economic liberalization in a country. A common attitude to zones is therefore that while broader liberalization is preferred, SEZs always benefit a country as long as they bring about this marginal improvement. The skeptical view of SEZs is that their geographically limited reach means that they are always somewhat misguided. If SEZs bring good policies, their geographical limitation only implies that these are underprovided.

This dissertation is an attempt to understand and adjudicate between these positions, and examine when the skepticism is more warranted than the praise. I take

account of the political economy of SEZs to explore why they come about, and how different conditions can make them both damaging and highly beneficial for an economy.

The first chapter gives an overview of the dissertation. The second chapter analyzes whether SEZs are better or worse than the status quo. Everything else being equal, does introducing SEZs have a positive effect on an economy? There are several problems with SEZs that may outweigh their benefits. They do not come for free, and governments often pay for much of the necessary infrastructure. Governments may also determine the zone's location and nature of production. If these choices are misguided, the zones become a bigger cost than a benefit to the country's tax payers. SEZs may also be a way for corrupt policy makers and bureaucrats to extract bribes from zone investors, or to give out procurement contracts to their peers. This abuse of SEZs can make them more of a burden than a benefit for an economy. Under the right institutions and zone policies, however, SEZs can indeed benefit an economy. I argue that democratic systems, political decentralization, and zone privatization are vital contributors to SEZ success.

In the third chapter, I assume that these problems have been dealt with, to examine SEZs from another skeptical angle. Zones can be tools for rent-seeking in a less obvious way than graft, namely as a way to preserve protectionism. If SEZs are used to avoid broader reforms in a country's trade regime, they cannot be seen as beneficial, even if they improve on the status quo. We must therefore compare SEZs with their politically plausible alternative. To illustrate this notion, I use a model of endogenous tariff formation, where the government sets tariff rates in response to the lobbying of interest groups that are either for or against protectionism. If this rent-seeking scheme is

threatened, the government can introduce SEZs as a second-best solution to preserve some of its rents. In light of the model, I discuss the benefits of SEZs compared to their political alternatives. SEZs are in fact not beneficial if the government would otherwise be induced or forced to introduce broader economic reforms. They only benefit a country when the political alternative is more protectionism. I use a case study of the Dominican Republic to exemplify how SEZs can come about as a rent-seeking scheme. I also discuss how SEZ incentives to import prevent them from becoming locomotives for economic growth.

The fourth chapter revisits the problem with governments either being misguided or driven by corrupt motives when introducing SEZs. Although they are a suboptimal way to expand exports and boost development, the motives behind SEZs will be very different if local interests pursue them with the aim to expand economic activity in their area. In such cases, SEZs may not only benefit a country, but even lead to broader economic reforms. Elites with interests in economic liberalization can use SEZs to bring about reforms gradually, when a majority of the government elite opposes reform. For this to happen, the country must be decentralized, so that pro-reform minorities have the incentives to introduce SEZs and ability to find the right SEZ policies. Once introduced, SEZs make economic liberalization a lucrative option for more elite members, resulting in more SEZs and eventually countrywide economic liberalization. Comparative case studies of China and Ghana illustrates these points.

The last chapter provides some concluding remarks. In all, this dissertation brings new unique perspectives on SEZs. Because of the current ubiquity of SEZs in the world,

they also contribute to our understanding of the broader fields of trade policy, rent-seeking, and decentralization. I hope that my work provides informative and thought provoking reading.

1 THE POLITICAL ECONOMY OF SPECIAL ECONOMIC ZONES¹

Special economic zones (SEZs) have contributed to economic development in several countries, while being utterly unsuccessful in others. This paper is an attempt to understand why some zone schemes succeed and others fail in promoting economic growth. Many SEZs offer a liberalized business climate and lower taxes and tariffs. This encourages investments and creates a flourishing business community. Foreign investors cluster in SEZs, partly thanks to their safer and more well-known business climate (He, 2002). They then spread their know-how about technology and quality upgrading to domestic firms, which can then upgrade and become exporters (Romer, 1993; Johansson and Nilsson, 1997). SEZs can thus pull the rest of the country on a path of faster economic development (Basile and Germidis, 1984; Litwack, 1998; Schrank, 2001). They may even contribute to countrywide political reforms (Auty 2010; Crane, 1990; Weingast, Weingast, Montinola and Qian, 1995: 62).

Despite their potential, some SEZs have not seemed to make much difference, and in some countries even become drags on the economy. For instance, the Philippine authorities made significant investment in infrastructure for their zone in Bataan. They upgraded the port, constructed a new dam for energy supply and erected new fancy office

¹ This paper was published in *the Journal of Institutional Economics*, 2015, 11(1): 167-190.

buildings. Still, the zone failed for a long time to attract much business, rendering the project a very expensive failure for the government (Warr, 1987; FAB, 2013).

Explanations of SEZ success or failure often concern the quality of the infrastructure, location and zones size (Farole and Akinci, 2011: 221; Pradeep and Pradeep, 2008). Bad roads and unreliable power supplies deter foreign investors. Inappropriately designed facilities in zones cause congestion or social problems. Other issues include inadequate maintenance, zone promotion, policy coordination and tax incentives, as well as disproportionate performance requirements (FIAS, 2008: 5, 50). The export processing zone in Dakar, the capital of Senegal, allegedly failed due to an excessive bureaucracy, high electricity costs and a lack of sufficiently cheap labor. In addition, the zone was located far away from the port of Dakar and isolated from major trading routes (Cling and Letilly, 2001: 22).

Successful zones on the other hand, are described as having linkages to the domestic market, so that their investors buy production factors from domestic sources (Farole and Akinci, 2011: 217). Locations near urban areas, national borders and skilled labor as well as good timing are other cited recipes for success (Yuan and Eden, 1992). Sometimes, SEZ success is simply attributed to policy makers targeting “the right industry”. High-technology production has been a winning concept in many countries. However, when the authorities in Bangladesh targeted high-technology firms their SEZs failed. The zones started attracting significant investment only when the authorities allowed garment producers to invest in them (Farole and Akinci, 2011: 41). There may be as many explanations of SEZ success or failure as there are zones. Different SEZ models

may simply be relevant in different contexts and at different levels of development (Farole, 2011a: 2).

Much of the perplexity in explaining SEZ success is due to how SEZ success is defined. Studies measuring SEZ success look at employment, FDI, export and production growth in the zones as indicators. They compare such aggregate statistics to previous trends and to the rest of the country (e.g. FIAS, 2008: 35; Aggarwal, 2007: 18). However, the existence of economic activity in an SEZ does not make it a net positive to the economy. A zone may be able to attract businesses because it receives an abundance of government subsidies. If a government transfers resources to a zone, that does not make it a successful growth strategy. SEZs have for example been criticized as a vehicle for destroying agricultural land in the government's pursuit of industrialization (Chaudhuri and Yabuuchi, 2010). A growing SEZ may also simply be located in an area naturally disposed for high growth. Even when a country hosting SEZs shows positive growth, that may happen for reasons unrelated to their zones. And although SEZs can alleviate unemployment and raise workers' wages (Kusago and Tzannatos, 1998; Madani, 1999), jobs in SEZs may be relatively insecure, since multinationals may be more prone than others to relocate from an SEZ or restructure when their costs rise (Lee, 1999).

The welfare effects of duty-free zones have been analyzed in theoretical models by Hamada (1974), and later by Hamilton and Svensson (1982). Using a Heckscher-Ohlin type of framework, they breathe skepticism over the value of foreign capital that duty-free zones attract. Miyagiwa (1986) on the other hand, shows that zones do promote welfare and also mitigate some of the distortions in an economy that import tariffs cause.

Warr (1989: 66) applies a cost-benefit analysis of SEZs, to account for their cost as well as their benefits. Applying this method, Jayanthakumaran (2003: 63) argues that the zone programs in South Korea, Malaysia, Sri Lanka, China and Indonesia are “economically efficient and generate returns well above the estimated opportunity cost”.

All these methods to analyze SEZs fail to account for their dynamic effects. They obscure the spread of knowledge from foreign corporations to domestic business, as well as the zones’ ability to lead to countrywide economic reform. In the context of political decentralization, SEZs can encourage competition between regions for capital, spurring reforms on the local level (Weingast, Montinola and Qian, 1995: 77). Whenever zones are given some political autonomy, they can move faster with reform than the rest of the country (p. 62). Since many SEZs tend to change, adjust and expand, they are better described as processes than fixed policy packages. As such, SEZs must be considered successful when they have a positive effect on the economy in the long-run.

Conventional explanations for SEZ success fail to address its underlying causes, and are rather depictions of the result of successful or failed SEZ schemes. If the “right” industries should invest in SEZs, the question remains who is to determine what those industries are. Good infrastructure helps attract businesses, but one must ask who decides where to locate the new roads, bridges and buildings. Decision makers need both be able to find the proper policies for the zones and have the incentive to implement them. They must in other words both overcome a problem of knowledge and one of incentives.

A robust political economy analysis deals with these two problems of policymaking. In an ideal world, policy-makers are both omniscient and benevolent

social wealth maximizers. They find the optimal economic policies and do not hesitate to pursue them. In this world, policy makers will only introduce SEZs when they are the country's best option among development policies.

A political economy analysis relaxes assumptions about perfect knowledge and benevolence (Boettke and Leeson, 2004: 101; Pennington, 2011: 3). When market actors and public officials have imperfect knowledge and motivations, wealth creation relies on the right institutional context (Pennington, 2011: 2). A robust political economy is an institutional set-up that yields beneficial outcomes despite the flaws of policy makers and people in business. Institutions can channel the actions of self-interested and badly informed people into activities that increase social welfare. In a market, a robust political economy drives people to enrich themselves by serving one another (Hayek, 1960: 76). In politics likewise, the right institutions drive policy makers to pursue policies that increase welfare.

All policies introduced under non-robustness are not economically damaging. Sometimes, policy-makers are lucky and get it right. Some policy makers do have benevolent motives. Yet, under non-robust institutions, imperfect knowledge and policy makers' self-interests bias policies towards other ends than economic prosperity.

After an overview of the SEZ concept in Section 2, Section 3 explores the robust political economy framework for SEZs. Section 4 further illustrates the political economy implications by studying the Chinese and Indian experience with SEZs, and Section 5 concludes.

1.1 The SEZ concept

The concept of areas with special privileges has been around at least since the 16th century but the first modern SEZ was founded in Ireland in 1959 (Guangwen, 2003). In 1975, there were still only 79 SEZs in the world (ILO, 2007). After China's economic reforms in the 1980s, SEZs gained international popularity and by 1995, there were around 500 SEZs worldwide. Only a decade later, this number was estimated to be between 3,000 and 5,000 zones. The majority of SEZs are located in developing countries (Carter and Harding, 2011: 8). Some noteworthy SEZs making the news lately are projects in Tanzania, Belarus, Myanmar, Laos and Japan.²

SEZ businesses usually enjoy benefits such as lower tariffs and taxes. Many zones also offer lower environmental requirements, looser labor regulations and other policies that lower the cost of doing business. Some SEZ authorities even have the autonomy to determine their own tax and regulatory policies or have their own judicial system. In other countries in contrast, national governments set the rules and can impose requirements on SEZ firms regarding their type of production, export performance and how many domestic workers they employ. Such requirements make SEZs resemble state planned industrial clusters, rather than liberalized free zones. SEZs can thus both be

²News articles are available from <http://www.ippmedia.com/frontend/index.php?l=67168>>; <<http://news.belta.by/en/news/econom?id=701579>>; <http://www.elevenmyanmar.com/index.php?option=com_content&view=article&id=5864:thilawa-sez-shares-oversubscribed&catid=33:business&Itemid=356>; <<http://www.nationmultimedia.com/aec/Laos-special-economic-zone-attracts-investors-30215777.html>>; <<http://www.economist.com/news/finance-and-economics/21600145-shinzo-abes-fancy-economic-areas-are-big-enough-not-bold-enough-out-zone>> [26 April 2014].

spaces under more and less government control than the rest of the country (Haywood, 2000). Yet another paradox is that while SEZs are symbols of free trade, they are regularly in breach of World Trade Organization agreements, as a form of harmful export subsidies (Creskoff and Walkenhorst, 2009).

SEZs take on many different names and functions. Free trade zones may offer facilities for storage, transshipment and redistribution. Export processing zones (EPZs) are mainly for manufacturing and other exporting industries. Single enterprises can constitute so called “single factory zones”, while free ports in contrast are often large and diversified (FIAS, 2008: 3, 10; Costachie, 2008; Farole and Akinci, 2011: 2). While this way of differentiating between zones may be useful when studying certain industries or trade policies, conventional labels offer little guidance for an analysis of the political economy of SEZs and their institutional context. In this paper therefore, “Special economic zones” (SEZs) will serve as a general term.

SEZs can spur economic growth through different mechanisms. They both attract FDI and help domestic businesses grow, as they relocate to zones with more liberal policies than the rest of the country. Firms can form clusters in zones and benefit from network effects and economies of scale (Porter, 1998, 2000; Harrison, 1992: 27). Zones are said to create employment opportunities both directly and indirectly by increasing the demand for domestic production factors. In addition, new international enterprises investing there may spread technological expertise outside zone boundaries (FIAS, 2008: 32).

It may seem strange that governments do not implement beneficial policies nationwide rather than the second-best option of confining them to certain areas (World Bank, 1992). Three explanations for this are worth considering. One is that zones form clusters that would not come about otherwise, due to the inability of businesses to coordinate their locations as effectively (Farole and Akinci, 2011: 147-8).³ Second, governments do not know the effects of certain policies, and SEZs provide test grounds to try them out (Sit, 1985: 84). Third, nationwide reforms are infeasible due to resistance from the political elite or from the public. SEZs may then be a politically realistic second-best policy option. The robust political economy analysis in this paper tests the validity of these arguments.

1.2 Robust Political Economy

The problems of inadequate knowledge and adverse incentives form the core of a robust political economy analysis. I address these problems in turn to examine how SEZs can be introduced in an institutionally robust context.

1.2.1 The Knowledge Problem

Picture for a moment a group of central government officials scratching their heads over the task of finding the best model for a new SEZ. In a politically centralized system, they have both the power and the obligation to design the policies for the

³ This coordination problem is the classical argument for state involvement in industrialization (Rosenstein-Rodan, 1943).

country's SEZs. In planning the SEZ, they are trying to determine what the most efficient structure of production is. They are thus essentially planning the organization of cooperative creation.

Alas, even if the officials are benevolent social welfare maximizers, they lack sufficient knowledge to fulfill this task. Such knowledge is dispersed throughout the society. It is also the kind of knowledge that entrepreneurs and investors accrue through years of practice and that cannot be communicated to others in a useful way (Hayek, 1945). The distance between decision makers and those with market knowledge is the root cause of the knowledge problem in policymaking. Therefore, the more politically centralized a system is, the more severe it is the knowledge problem. The knowledge problem prevents governments from promoting technological progress by planning economic production and resource allocation (Lavoie, 1985: 52-54). Central government officials cannot possibly study in detail the fluctuations and progresses of the country's local economies the way that businesses do. In the institutional context of a politically centralized system therefore, SEZs tend to be badly designed and misplaced.

The SEZ planners may realize their limited ability to determine a good zone location. Any site is unlikely to be profitable for investment if market entrepreneurs have not found it a good location for investment already. Lower taxes that bring businesses to the zone are also likely to cause an inefficient allocation of economic activity in the country. This is a general dilemma in industrial policy. To benefit the economy, government officials need to have better insights than private actors do about how best to allocate resources and where to pursue investments. Since this is seldom the case,

governments that intervene in the economy with public resources experience unintended and possibly damaging consequences but little economic growth (Ikeda, 2005; Kirzner, 1985: 123; Mises, 1977: 25).

One argument for government interventions in business location is that they can form industrial clusters. However, cluster policies are prone to the same failure as other government interventions (Desrochers and Sautet, 2004). The knowledge necessary to coordinate clusters that add value is not in the hands of policy makers but of market actors. Governments tend therefore to promote more high tech clusters than is compatible with their countries' comparative advantage (Davies and Ellis, 2000). Clusters are also unlikely to be the cause economic growth, but rather form as a result of a sector's progress (Martin, 2001; Seshadri and Storr, 2010: 362). No one can really predict where the industrial centers of the future will locate or what they will produce, since clusters tend to form spontaneously from private market coordination (Miller and Côté, 1985).

The claim that governments promote growth by using SEZs to facilitate cluster coordination is therefore not convincing. To solve the knowledge problem, central government officials need to move the decision making about SEZs closer to the people with the right knowledge. Unable to choose proper SEZ locations and industries, they can delegate such crucial decisions to people who can. There are two main ways to accomplish such decentralization of decision making: Private decision making and political decentralized decision making.

1.2.2 Private decision making

The knowledge problem emerges when decision making is trusted to policy makers who are too far away from market to adequately understand it. They can however overcome the problem by trusting crucial decisions to market actors. One way is for SEZ planners who want to target specific industries to avoid specifying the location of zone investors. Several countries, including Mauritius, Fiji, Togo, Senegal, Cameroon, Nigeria Kenya and Honduras, even allow “zone status”, with all the privileges that entails, to single firms or factories which can be located anywhere (Costachie, 2008: 145; Carter, Harding, 2011: 3; Farole, 2011b: 42; Engman, 2011: 49). Since the single-firm zone deviates from the traditional notion of a zone, it may fall outside the definition of an SEZ. Still, the strength of such schemes is that private investors in a particular industry are allowed to find proper locations for their production.

Government officials can also avoid the knowledge problem by choosing zone location while allowing private investors to decide which industries to locate there. Governments do not need to pick market winners and losers to create growth promoting economic zones (Auty, 2011: 213). Yet, as long as the government is financing zone development, even the delegation of both location and production decisions does not insure against the waste of public funds. If the government spends lavishly on infrastructure such as roads, energy supply and telephone lines, it can still misallocate resources. While an SEZ appears successful if it attracts business, the benefits they bring may therefore not outweigh the costs.

The planners thus need to further exploit the knowledge of private investors, who better understand the business opportunities of the zone. By demanding that the private sector pays for infrastructure and facilities, its investments will be a reflection of a zone's potential. This is the model of "private" SEZs, which are becoming increasingly popular. Compared to government developed SEZs, private zones have a record of better performance (FIAS, 2008: 4, 7). The Philippines saw their first private SEZs in 1991. Since then, the number of private zones in the country grew rapidly, to 76 zones in 2008 compared to only seven public ones (Id: 64). Many of the successful SEZs in Central America and the Caribbean's in the 1980s and in Southeast Asia in the 1990s enjoyed little government planning and support (Id: 26). When the Honduran government granted SEZ access to more foreign investors, private zone investments increased to overtake the publicly operated zones. In 2011, only one public zone remained, hosting a mere 11 companies (Engman, 2011: 59).

The self-interest of market entrepreneurs drives them to limit their investments to wealth increasing projects. Voluntary entrepreneurial projects are therefore more likely to succeed than similar political schemes (Pennington, 2011: 205). Private zone development is not a guarantee that investors will in fact invest in the SEZs. Natural resources, stable environment and good institutions are more important than low tariffs and taxes for a location's business attractiveness (Morriss and Moberg, 2012: 12, 57).

An SEZ that lacks resources will not be profitable if developed, and thus tend not to attract developers. An empty SEZ is a signal that it is badly located or unattractive for investors for other reasons. This allows policymakers to change their plans without

causing a loss of tax payers' money on lavish infrastructure. The private zone model is therefore economically sound, albeit politically unappealing. Minimally developed private SEZs are not inferior to more developed but much more expensive zones. For instance, Sri Lanka's small zones have received very little public investment in warehousing, transport infrastructure and standard factories (Aggarwal, 2005: 37). They may therefore look like a failed project (Prihodko et al., 2007: 149; Madani, 1999: 106). Yet, Jayanthakumaran (2003: 63) makes the claim that in a crude cost-benefit sense, they did generate returns above their opportunity costs. If private investors do make bad investments, then they, not the country's taxpayers, pay for the mistake.

1.2.3 Decentralized political decision making

The SEZ planner may be reluctant to rely on the private sector for zone development, knowing how bad empty or undeveloped zones look in photographs. They may, however, also avoid the knowledge problem through a less radical form of decentralization, where decision making remains in the hands of political institutions but is delegated to the local level. Local governments, which are often well oriented in local conditions, can have a sufficiently good understanding about a zone's potentials to avoid lavishly spending on failed projects. Local bureaucrats can also observe how conditions change on the ground and decide on policy changes more rapidly than officials at the national level. They may therefore sufficiently mimic the reactions of private investors to market dynamics.

Local zone regulators can more easily see the opportunities of more entrepreneurial and radical policy changes when designing and implementing policies

(Farole and Kweka, 2011: 5). For instance, the decentralized system of the United Arab Emirates allowed the ruler of Dubai to determine that their financial center would have British common law, rather than the Shari'ah law that prevails in the rest of the country. This allowed the center to attract multiple businesses that would have been reluctant to work within the restrictions of Islamic finance (Strong and Himber, 2009).

In a politically decentralized system, zone authorities are more likely to try out very different models. They can then observe and copy policies that work elsewhere. Also, if one SEZ regulator adopts bad policies, this affects only one SEZ, rather than all zones, as in the case with national SEZ policies. Local policy makers can act like market entrepreneurs and introduce policies in a trial-and-error fashion, making SEZs into test-beds for policymaking. As will be discussed later, this dynamic was a driving force behind China's gradual reform. Malaysia, Jamaica, Kuwait, and Jordan have also used their SEZs as test-beds to demonstrate the impact of different policies (FIAS, 2008: 50).

Introducing SEZs in a politically decentralized system can ultimately lead to national policy reforms, as the success of one SEZ encourages the introduction of additional zones. Cling and Letilly (2001: 24) observe how several Asian countries ultimately abandoned the model of low-tariff SEZs when they opened up to trade. When SEZ policies multiply countrywide, zones become decreasingly "special". In Central America, Honduras expanded its SEZ program several times since its launch in the 1970s, until the government in 1998 declared the whole country a "free zone area" (Farole and Akinci, 2011: 49).

The diminishing importance SEZs can therefore indicate that they are reshaping national policy. South Korea's manufacturing zones became increasingly irrelevant because of national reforms. By 1985, they contributed only 2.9% to national manufacture exports (Burman, 2006: 11). In Taiwan, new SEZ investments had virtually dried up by 1980, as infrastructure and duty-free arrangements improved throughout the country (p. 10). Two of the arguments suggested in Section 2 for why governments introduce SEZs rather than take on nationwide economic reforms have merit. First, it is possible that policy makers do not know the effects of economic reforms, and therefore use SEZs to test them on a smaller scale. However, for SEZs to vary according to local conditions, central governments are best to allow local policy makers to find each location's suitable SEZ policies. Second, a piecemeal approach to reform can overcome political resistance to change from the political elite or the people at large. As showcases for economic liberalization, SEZs may convince people in power about the benefits of such reforms.

While decentralization, whether political or through private SEZ development, promotes SEZ performance, better performance can in turn improve the institutional context of SEZs. When central government officials see that local policy-makers are better at instituting good SEZ policies, they are less likely to recentralize the decision process. Also, when privately developed SEZs succeed, this model can become "best practice" of SEZ governance (Farole, 2010a: 15).

1.2.4 The incentive problem

Solving the knowledge problem is only one step toward a well functioning SEZ program. Like other policies that offer special privileges, SEZs create opportunities for rent-seeking and hence the incentives for policy makers to use them for personal gains. To explore the incentive problem, we can no longer assume that the SEZ planners are benevolent. Government officials pursue higher salaries, benefits and social status. Democratically elected politicians want public support and votes in the next election. Bureaucrats seek prestigious titles, larger offices, bigger staff, more leisure and the occasional trips to a pleasant resort on behalf of their agency.

In the right institutional context, the self-interest of politicians and bureaucrats leads them to pursue growth promoting policies. The wrong institutions will lead officials to pursue their personal goals by means of rent-seeking and corruption. In addition to the opportunistic profiteering from rent-seeking businesses and bureaucrats, policy makers may introduce policies like SEZs to create opportunities for businesses to rent-see (Wallis, 2006: 25). Regulators may allow procurement contracts to those offering the highest bribes, or demand bribes from the companies investing in the zone. Government policy makers may also extract bribes and favors from local officials who are eager to host an SEZ. They can even use SEZs to alleviate pressure for broader economic reform that would threaten their rent-seeking revenues.

Decentralizing political decision making is not the solution for the incentive problem that it is for the knowledge problem. Rather, the institutions needed are those that give SEZ decision makers a stake in the SEZ success. If central government officials

transfer power and control to lower levels of their bureaucracy, zone schemes may instead become hostage to rent-seeking by executing bureaucrats. These may claim higher expenses than necessary for zone projects, in order to expand their agencies (Niskanen, 1971). They may waste public funds by shirking on the job (Tullock, 1965). If zones entail massive governmental infrastructure investment schemes that demand large amounts of resources, they are prone to attract corruption at some level (Beaulier and Subrick, 2006). Bureaucrats can demand bribes from the SEZ businesses or give infrastructure contracts to people who pay them for the privilege. Infrastructure obtained in this way will not meet the market test. It may end up costing more to maintain than the economic benefits it brings, or even remain idle (Farole, Akinci, 2011: 4).

The more layers of corrupt agencies that a firm must pass to obtain various permits, the higher is the risk that it must pay more in bribes than it makes in profits (Shleifer and Vishny, 1993). If each bureau extracts as much as it can from a business, SEZs can become common pools of graft for bureaucrats, making the system unpredictable and opaque for investors (Easterly, 2002: 247). Such disbursed and anarchic corruption can kill economic growth (Frye and Shleifer, 1997).

If the SEZs are designed to serve as vehicles for corruption, they will be inherently difficult to reform and made successful. The experience with SEZs in Russia in the 1990s exemplifies what happens when zones are at the center of corruption and criminal activity. The legal environment in their SEZs ended up even more insecure for investors than the rest of the country. A reform in 2005 aiming to discourage corruption saw the Russian government introducing SEZs with more federal regulation and less tax

benefits. While the corruption seems to have diminished, little productive economic activity has appeared in its place. The reforms also did not change the public perception of the zones in Russia as centers of corruption (Tuominen and Lamminen, 2008: 11-12).

1.2.5 Robust rent-seeking

Any amount of rent-seeking will not doom SEZs to failure. An SEZ will on net be beneficial for the economy under very moderate rates of rent-seeking. To achieve this, it seems possible that policy-makers could strike rent-seeking agreements with zone investors. Similar to distributing exports quotas to firms in exchange for rents (Krueger, 1993), policy-makers can guarantee businesses SEZ status on a continual basis in exchange for bribes or favors. SEZ permits must then be attractive enough to be of value to businesses. Policy-makers thus align their interest in extracting rents with promoting attractive and functioning SEZs.

Corruption has previously been claimed to help rather than hinder economic development. Leff (1964) argued that corruption can lead to efficient outcomes, as the most efficient firm is able to offer the highest bribe and can thus win the production rights. Lui (1985) and Beck and Maher (1986) have shown theoretically how bribes can help bring about socially optimal outcomes. If illicit rent-seeking is the motive for SEZ creation, and the zones attract investments, then rent-seeking may also in the case of an SEZ benefit the economy as a whole.

Firms would benefit from investing in an SEZ as long as they pay less to government officials than what they gain from the SEZ status. They can count under-the-table payments as just another tax of doing business. The SEZ business community can

flourish as long as rent-seeking does not dissipate all the extra profits that the SEZ status brings. International firms may shun investing in a corrupt environment, but domestic firms are more likely to endure, due to the lack of better domestic alternatives and higher costs of venturing abroad.

Rent-seeking agreements are however only a temporary solution to the incentive problem. The SEZ planners need to make a credible long-term commitment to companies that they will not increase the bribes that they demand from SEZ companies. Such a commitment is only viable if they can promise that both their own and future government administrations will adhere to it (Haber, 2002: xv). Any rent-seeking arrangement is therefore highly unstable in the long-run.

It is also unlikely that SEZs built on rent-seeking agreement will benefit the economy if it relies on government investments. Since publicly funded infrastructure lowers the companies' costs, more such spending will allow for higher bribes. The officials therefore have the incentive to invest more in the zone at tax payers' expense. In the long run, the policy will not align their self-interests with economic progress and will therefore not be robust.

Even firms that do not rely on public infrastructure are unlikely to contribute more to the economy if given SEZ status in exchange for bribes. Single factory SEZs, where a firm can choose its location, illustrate this point. Governments can grant "zone status" to single firms regardless of their location. They can exchange tax-funded benefits in exchange for rents in the form of bribes and favors that go straight into the officials' pockets. That arrangement may be stable, but it is unlikely to benefit the economy.

1.2.6 The democratic solution

A functioning democratic and transparent system is one institution with the potential to solve the incentive problem. Public accountability means that officials can gain personally from growth promoting SEZ schemes. Politicians enjoy public support and thus electoral votes if they can take credit for good SEZ policies. If the link between politics and economic outcomes is clear, they have a stake in designing good policies, including growth promoting SEZs. A democratic system is therefore more likely to solve the incentive problem if it is sufficiently decentralized, as this links a politician's policy judgments closely to the chance of reelection.

The combination of democracy and decentralization does not only imply less high-level corruption. It also gives local officials both the incentive and the ability to make sure that their bureaucracies do not engage in low-level corruption. In contrast to a central government, they are better able to understand what incentive scheme can work for their agencies to create a clean bureaucracy. SEZs can thus be tools for policing low-level corruption (Wei, 1999). This incentive of local officials to police low-level corruption is present for any system that rewards low-level officials for good SEZ performance, even in a non-democratic context.

1.2.7 Private SEZs

Private zone development, previously found to be a solution to the knowledge problem, can also be a solution to problems of adverse incentives. Private SEZs align incentives of private developers trying to maximize their profits with providing the best possible business climate at the lowest cost. They therefore tie economic progress in a

zone directly with the rewards to its developers. Private zones are less likely to end up as vehicles for rent-seeking. When government officials are not providing the infrastructure and other conveniences to SEZ firms, corrupt officials have fewer opportunities to extract rents from companies.

Compared to government officials, private companies also have different incentives when deciding how to make SEZs more attractive for companies. While governments compete for businesses by adjusting taxes, tariffs and subsidies, private developers are generally unable to change such policies. They must instead compete for investments by offering a more attractive business climate (FIAS, 2008: 21). Producers of goods attract different kinds of consumers when competing with quality rather than price (Hirschman, 1970: 47). Likewise, private SEZs have shown to attract fewer firms that are mere bargain hunters for tax breaks or that rely on cheap labor for their production, and more technology intensive businesses. Private zones are therefore more likely to generate longer-term investments as well as countrywide technology transfers. Studies also show that private zones have an overall better record than public zones on environmental and social indicators (FIAS, 2008: 21, 46).

Both private SEZ development and democratic system are ways to move decision making to actors with a long-term stake in SEZ performance. Political actors often do not have much to gain by investing in projects that add the highest social value (Moberg and Wagner, 2014). Democracy can mitigate this if the system is sufficiently decentralized. More radically, privatization moves decision making to people whose compensation is directly linked to SEZ performance.

Solving the incentive problem also yields its own dynamics towards institutions that promote SEZ success. When voters in a democratic system realize what benefits SEZs can bring, they will demand more say about SEZ policies and keep the spotlight on policy-makers working on SEZ policies. This further strengthens the connection between SEZ performance and the reward to policy-makers. Also, when privately developed zones succeed, more private actors have the incentive to lobby the government for further private SEZ development.

1.3 Two contrasting SEZ schemes

The experiences with SEZs in India and China illustrate many of the points made in this paper. While no SEZ case is black or white, I use the Indian SEZ scheme to show in what ways SEZs may not be robust. China, on the other hand, seems to have overcome the knowledge and incentive problems.

1.3.1 The Indian case

India introduced their first SEZ in 1965 but had by 2000 only established seven zones (Gopalakrishnan, 2011: 139). These first zones were small enclaves for export manufacturing. They formed very few linkages with the rest of the Indian economy, and had virtually no impact on the country (Palit and Bhattacharjee, 2008: 19; Engman, Onodera and Pinali, 2007: 18). They also did not help improve India's negative trade balance or even increase the country's exports (Seshadri, 2011a).

India introduced a new SEZ Act in 2005, modeled on the Chinese SEZ scheme. The goal was to further promote zone exports and develop zones of larger scale (Palit and

Bhattacharjee, 2008: 88-9, 97; Seshadri, 2011a: 28). With the new law, the number of zones has increased. By the end of 2010, India had approved as many as 580 SEZs, 112 of which were actually exporting.⁴ Alas, many SEZs became grounds for real estate speculation (Mitra, 2007; Seshadri, 2011b). Meanwhile, there has been much controversy over the dispossession of farm land, with opposition to SEZ development resulting in violence (Roy, 2009: 79). The 2005 Act has also been criticized for pricing farmers out from their lands and causing “conversion of the fertile land into cement structures” (Mitra, 2007: 13; Levien, 2011; Kahn, 2008: 14). Many SEZ plans have been obstructed by unpredictable and burdensome government policies. The SEZs that currently operate are allegedly not very profitable (Govardan and Srivastav, 2012).

Let us start with India’s possible knowledge problem. From the start, the Indian governmental authorities often determined both zone location and the nature of zone production. In several cases, they chose poor, backward and unattractive zone locations. As a result, SEZ investments did not match market conditions. The most successful zones were already high performing before becoming SEZs. In addition, SEZ regulations frequently posed obstacles for businesses in the zones to subcontract with firms outside the zones (Seshadri and Storr, 2010: 363).

India has made some progress towards decentralization. Prior to 2005, the Indian zone authority was a government department office that lacked autonomy over SEZ

⁴ Department of Commerce 2013 press releases: http://commerce.nic.in/pressrelease/pressrelease_detail.asp?id=2704.

approval clearances and zone development (Aggarwal, 2005: 16).⁵ With the 2005 SEZ Act, India moved towards more decentralized political decision making. State and central governments both have greater discretion to regulate the zones (Burman, 2006: 5). There is also more emphasis on private zone development (Palit and Bhattacharjee, 2008: 174).

Still, decentralization does not seem to have gone far enough. The central government has imposed significant limits on how the SEZs may operate. Even though the aim is to develop larger scale SEZs like those in China, the zones have been limited to 5,000 hectares (Mitra, 2007: 15). On the other hand, while the government designated many of the new zones in urban areas, they set a minimum size of 1,000 hectares for the zones. In areas where vacant land is scarce, such a requirement is an impediment to SEZ development (Patil, 2013).

Other regulations are likely to stem India's SEZ success. Prospective private developers must specify what facilities will be developed, how much investment they will attract and how many jobs they will create (Palit and Bhattacharjee 2008: 114). At least 35% of zone areal must host processing activities, and 60% of the new zones are allegedly designated as technology zones (Harding, 2011: 166).⁶ In 2008, all SEZs in India except twelve were industry specific, which means that the government only allows for a particular form of production in them (Palit and Bhattacharjee 2008: 170). With all

⁵ Sri Lanka and Bangladesh offer a comparison to India. They both had more decentralized SEZ governance, with more autonomy given to SEZ authorities with, and their SEZ schemes seem to have outperformed those in India (Aggarwal, 2005: 16, 42-44).

⁶ The IT sector has generally been one of the biggest beneficiaries of tax breaks in India (Mazumdar, 2008: 16).

the government's regulations and restrictions, it seems unlikely that India is overcoming the knowledge problem.

Palit and Bhattacharjee (2008: 182) argue that the government needs to conduct more research and gather more information to make better decisions about SEZ policies. The Indian government is a frequent employer of think-tanks, which provide policy analyses and the necessary information to design the zones (Id.). However, no amount of government induced research will give policy-makers the market knowledge that they would need to improve on the economy. A solution to the knowledge problem should rather lie in more solid decentralization of decision-making.

India's incentive problem can also help explain the modest performance of the SEZs. Corruption in India makes it an unattractive place for investors (Keshava, 2008: 18), and has plagued much government planned infrastructure in the country (Mitra, 2007: 11). It is therefore worth noting that the Indian SEZ scheme to a large extent relies on single-factory zones. Introduced in 1980, by 1998, India had 1,210 such "zones" in production, compared to 525 regular zones (Seshadri, 2011a: 36). As previously discussed, single-factory zones facilitate rent-seeking. The fact that the country relies so much on them indicates their potential role as vehicles for graft.

Low-level corruption is pervasive in India (TI, 2011: 12), which contributes to the incentive problem with SEZs, as they offer officials additional opportunities to extract rents. Aggarwal (2005) finds that prior to 1991, the Indian Board of Approval granted companies SEZ status first, after which additional permission was needed from the Secretariat of Industrial Approvals, the Ministry of Commerce, and state and central

government departments. A possible rationale behind such an arduous process is the creation of rent-seeking opportunities. As of 2005, most companies had to go through 15 authorities to enter an Indian zone. In a survey, over 60% of SEZ firms reported frequently making “irregular payments”, both to custom clearance and zone authorities (p. 26). Since 2005, a “single-window” policy is meant to simplify the registration process. The 2005 law is however complicated and unclear, so the process may still be too opaque to enhance the adverse incentives surrounding the SEZs (Harding, 2011: 164).

India is allowing for more private development, which could be a way to alleviate the incentive problem. Private developers have the incentive to create good conditions for businesses, as they compete for investments with other zones. The developers should only invest in SEZs to the extent that they create value, because they must finance the development and still need to make profits (Mitra, 2007: 12). Harding (2011: 163) points out however, that the Indian government still has broad powers to direct resources to the new SEZs. Urban land is largely a state monopoly, which inevitably induces rent-seeking (Seshadri, 2011b: 9). Indian officials thus have the incentive to use the SEZs in corrupt and inefficient ways. As a blatant example of this, the government has allegedly used eminent domain to sell land to private developers at artificially low prices (Levien, 2011: 460).

While private investments have been modest, local governments have not had the incentive to contribute in their stead. Because many SEZs have not been successful, state governments are reluctant to support them or finance the infrastructure. Some states even discourage their creation (Govardan and Srivastav, 2012).

1.3.2 The Chinese case

If India is a country with both knowledge and incentive problems, China, while far from perfect, exemplifies some possible solutions. China introduced its SEZs as a part of economic reforms in the end of the 1970s. In their first years, the SEZs attracted barely enough foreign capital to offset infrastructure costs. Like in India, much of the investments went into real estate speculation. The Chinese zones were even used in corrupt deals to smuggle goods onto the mainland (Crane, 1990: 62-75, 105). Also like India, while China initially went some way to decentralize decision making, the central government remained heavily involved in much of the SEZ management (p. 55).

In the beginning of the 1980s, the SEZ program moved towards more decentralization. An expansion of the SEZs followed, with the development of the country's fifth zone in Hainan in 1983, and rising SEZ performance overall (Crane, 1990: 78, 91-99). The SEZs have since multiplied, with 92% of China's municipalities hosting SEZs by 2008 (Wang, 2013: 136). They have been described as the engines of China's regional economy (Crane, 1994: 90; Fu and Gao, 2007: 22-23). Policies first introduced in the zones subsequently spread to other Chinese regions. While not all of China's SEZs have prospered, the scheme has generally been a success.

Decentralization was important in making China's SEZ scheme robust and hence a key component in its success. Xu (2011) describes the Chinese system as a "regionally decentralized authoritarian regime". The central government appoints and promotes local officials, but policymaking is to a large extent done at the lower levels of the bureaucracy.

Political decentralization, rather than SEZ privatization, alleviated China's knowledge problem. Committees appointed by the local governments make decisions about infrastructure improvements, land regulations and FDI approval (Wang, 2013: 136). Much of the SEZ regulation thus stem from local governments, with a better understanding of local conditions than the central government. Being close to the market, they can also adjust policies as market conditions changed and as the zones developed. Local governments helped the SEZs succeed by supplying much of the initial infrastructure. They also invested in a good business climate, with efficient regulations, proper administration and access to utilities (Zeng, 2011: 17).

Some Chinese zones were granted more autonomy than others. The SEZ in Shanghai, for instance, enjoyed much freedom in implementing its own regulations. As a result, the Shanghai stock exchange emerged as a self-regulated regional market, supervised by the municipal government (Xu, 2011). The Shenzhen SEZ near Hong Kong also illustrates the benefit of limited government zone planning. Initial guidelines for the Shenzhen zone stipulated that foreign direct investors had to be high-technology firms. This description was later changed to "some technology", which better matched the area's capacity, in particular the abundance of cheap labor (Farole and Akinci, 2011: 198).

China exemplifies how political decentralization drives SEZs to become test-beds for new policies. The Chinese SEZs worked as small confined laboratories for testing economically liberal reforms on a small scale (Cling and Letilly, 2001; Li, Li and Zhang, 2000). Financial, legal labor and pricing policies could first be introduced in the zones

(FIAS, 2008: 17). When proven successful, high-ranking officials in the Communist Party allowed the SEZs and their rules to be implemented more widely (Crane, 1990: 91-98; Xu, 2011).

China also overcame the incentive problem, although it did not institute democratization or much private zone development. Instead, the Chinese system of power awards local leaders with official positions and salaries based on the economic progress of their area (Xu, 2011). Local governments thus compete with each other for higher positions and other government benefits by introducing policies that improve local economic performance (p. 1099). The success of local leaders thus depend on the performance of their economies in a similar same way that they would in a democracy.

Increasing fiscal decentralization also incentivized local leaders to support the local economy. Starting in 1977, local governments entered revenue sharing contracts with the central government, which specified how much of the tax revenue that belonged to the central government (Chen, Hillman and Gu, 2002: 195). While a share of revenues was remitted to the central government, local governments were residual claimants of the rest of their revenues. The system created clear property rights among local governments, allowing them to act “as a conglomerate or as a holding company” (Li, Li and Zhang, 2000: 283).

The reward system in the government hierarchy, combined with fiscal decentralization, gave local government officials the incentive to promote their local businesses and foster economic growth, which in turn expanded their tax base (Chen et al., 2002: 195; Xu, 2011). As they needed to fund this development locally, they had the

incentive to be prudent and not invest in infrastructure in the SEZ wastefully. The Chinese hierarchical, yet decentralized, system thus worked similarly to a democracy to tie the interest of local policy makers to SEZ success.

In the Chinese case, SEZ success led to further institutional change. Thanks to fiscal decentralization, successful SEZs generated more wealth in the local economy. This had local officials pursuing further local autonomy, which strengthened political decentralization (Weingast, Montinola and Qian, 1995: 69). Also, as local leaders competed for businesses, they were encouraged to pursue reforms such as increased privatization of state-owned enterprises (Li, Li and Zhang, 2000).

1.4 Final remarks

This paper is a first robust political economy analysis on special economic zones (SEZs). The goal has been to show that the underlying growth promoting potentials of an SEZ model become clearer when examining the institutions that channel information and incentives of officials and businesses.

This framework can be applied to other development policies to understand the underlying causes of their success or failure to promote prosperity. Further research on SEZs should also include case studies applying the robust political economy framework. This theoretical overview is necessarily brief in its empirical applications. The real strengths of the approach will become clearer when applied in more detailed policy analyses.

Further research on SEZ will surely reveal deficiencies in the rough criteria for robust policies that I have suggested. For instance, Weingast, Montinola and Qian (1995:

55) emphasize the durability of the Chinese decentralized system of governance.

Mechanisms for sustainability may also be a necessary condition to prevent governments from centralizing a well functioning and decentralized SEZ scheme.

I have suggested that a robust political economy framework helps clarifying what institutions can make an SEZ program successful. In one way or another, the knowledge problem and the incentive problem must be solved for SEZs to promote economic progress and to avoid possibly becoming vehicles for corruption. Private zone development allows the decision making about zone investments to lie with the people with market knowledge. It also aligns the incentives of SEZ developers with SEZ success. Private development can thus avoid both the knowledge problem and the incentive problem. Limited zone planning and decentralization can alleviate the knowledge problem but also risks aggravating the incentive problem due to low-level corruption. Either democratic accountability or a Chinese style top-down reward system may therefore be needed to also address the incentive problem. Depending on the institutional context, countries can take very different paths towards robust SEZs.

2 LIBERALIZING RENT-SEEKING HOW EXPORT PROCESSING ZONES CAN SAVE OR SINK AN ECONOMY

Most economists see rent-seeking as wasteful (Buchanan, 1980a: 359; Tullock, 2005: 9). Lobbying by businesses to influence government policy is an unproductive activity. This view often blames policy makers for encouraging this behavior because they benefit from the rent-seeking (Hillman and Schnytzer, 1986; Haber, 2002; Rose-Ackerman, 2006; Nye, 2009; Buchanan, Tollison, and Tullock, 1980; Acemoglu and Robinson, 2000, 2012: 84, ch. 8). A contrasting view of rent-seeking is that it can actually produce some economic benefits. Rent-seeking can, for instance, encourage the provision of public goods (Cowen, Glazer, and McMillan, 1994). It may also increase the wealth of a country when its government engages in trade policy (Bhagwati, 1980; Bhagwati and Srinivasan, 1980). This paper extends the insight that rent-seeking can be beneficial by showing that a government can use export processing zones (EPZs) as a way to preserve the rents it earns from protectionism. A government can then be credited with liberalizing even though its intention is merely to maximize its rents.

Trade protectionism is famously destructive for a country's economy, and still, governments consistently set up barriers to trade. The reason is, of course, that policy makers can extract rents from businesses by giving them protection from competition. Therefore, they readily manipulate the system to create rent-seeking opportunities for businesses (Krueger, 1974; Wallis, 2006). Nevertheless, many countries have liberalized

trade, in particular the many developing countries that have abandoned import substitution for export-oriented policies (Rodrik, 1994; Frieden, 2006). An often-heard explanation for trade liberalization is that the sheer evidence of the failure of protectionism to promote growth convinces political leaders to do the right thing (Yergin and Stanislaw, 1998: 391; Frieden, 2006: 351). As I will argue, though, governments may liberalize trade even if their sole objective is to maximize their rents from lobbying.

EPZs play an important role in a government's decision to take a step toward trade liberalization. EPZs offer exporters tariff-free imports, lower or no taxes, and sometimes different regulations than the rest of the country. They usually take the shape of industrial parks, and host firms that export manufactured goods.⁷ With EPZs, governments can introduce free trade for exporters in particular areas without necessarily affecting a country's protected domestic industries. This has the great benefit of allowing for limited liberalization, while preserving many of the rents that a government enjoys.

Whether EPZs are beneficial therefore depends on the political circumstances. As a way to avoid broader trade liberalization, they do more harm than good to a country's trade regime. EPZs may also benefit a country, by providing the most radical liberalization that government can accept. Without consideration of the political economy

⁷ The zone concept is an ancient idea, and governments' objectives with introducing them have surely varied over time. At the time of ancient Greece, the island of Delos was appointed a free harbor to encourage imports (Farole, 2011: 31). The zones have since evolved into hubs for manufacturing and whole cities. The first EPZ was established on Shannon Island in Ireland in 1958 (FIAS, 2008). EPZs do not host residential property, in contrast to large and inclusive special economic zones like those in China.

of EPZs, they may give the appearance of a growth-oriented government's conscious pursuit of liberalization. Scholars see EPZs as tools for reform and even prescribe them as a development policy (Basile and Germidis, 1984; Schrank, 2001; FIAS, 2008; Lockridge, 2012). However, by their nature, EPZs rarely live up to the high expectations.

To understand why EPZs tend to succeed on some margins but not on others, I study the EPZs in the Dominican Republic an example of a scheme with an appearance of success. The Dominican government has used the EPZs to attract investments and promote exports (Farole, 2012). Scholars studying the scheme are impressed by its size, and the diversification and sophistication of EPZ production. At the same time, the program has failed to spread this development and sophistication to the rest of the country. The EPZs have become "islands of excellence" that have remained secluded from an otherwise underdeveloped economy (Sánchez-Ancochea, 2012).

The Dominican Republic makes a good case study in relation to other countries with large EPZ schemes. In India, for instance, the EPZs still represent only a small fraction of total exports and may therefore not have a large impact on the economy for that reason (Seshadri, 2011a: 33). Other countries, such as Ghana, have high EPZ exports to total exports ratios, but rely on single exporting companies that are granted tax benefits to produce such figures (Farole, 2010a). There are however several small Latin American countries, such as Honduras and Nicaragua, which similarly to the Dominican Republic have successful EPZs while the rest of the economy is lagging behind (McCallum, 2011). For them, the Dominican Republic makes a good representative case to understand this phenomenon.

As I will explain, the divide between EPZs and the rest of the economy is a logical outcome of how EPZs work. The Dominican case exemplifies my theory of EPZs as a rent-seeking scheme that fails to generate more than marginal liberalization in a country's trade regime. To study the Dominican case, I conducted three field studies between November 2013 and May 2014. The interview material derives from 52 interviews with EPZ company representatives, zone developers, agency officials, representatives of nongovernmental organizations, and academic experts. To ensure frank discussions, I guaranteed all the sources anonymity.

The next section discusses why a government introduces and preserves EPZs. Section 3 presents a model of endogenous tariff formation in the absence and in the presence of EPZs. Section 4 explains how the framework illuminates the costs when EPZs are beneficial. Section 5 illustrates the theoretical discussions with the case of the EPZs in the Dominican Republic, and Section 6 concludes.

2.1 Why EPZs Emerge as Rent-Seeking Tools

EPZs emerge as a way for the government to preserve rents in the face of pressure to liberalize trade. As this section explains, a government earns rents from interest groups that lobby to influence its trade policies. Trade liberalization would deprive the government of those rents. It will only have an interest in pursuing change if a strong lobby emerges in favor of trade liberalization. The government can then use EPZs to divide the economy into free-trade and protected sectors, to target liberalization to those who want it.

Disputes over trade policy provide great opportunities for a government to earn rents. They incentivize businesses to lobby to influence policy to their advantage. Much of this lobbying benefits the government, through campaign contributions, kickbacks, or vocal support for the government's trade policies (Krueger, 1974; Rodrik, 1995). To optimize its rents from lobbying, the government rewards interest groups with tariffs and other forms of protection that reflect their political influence (Krueger, 1974; Baldwin, 1982; 1989; Hillman, 1982; Cassing and Hillman, 1986; Alejandro, 1967; Dixit, and Londregan, 1995; Eichengreen, 1989; Gallarotti, 1985; Grossman and Helpman, 1996; Lee and Swagel, 1997; Pincus, 1975).⁸ The conflict over tariff rates implies that some firms are selling the same goods that others use in their production. This discussion thus applies to those goods where there actually is a conflict over individual tariff rates.

The rents a government earns from lobbying explain why it does not want to liberalize trade. Trade liberalization implies that the government either abolishes tariffs, or caps them at low rates. Interest groups find their lobbying futile when they are virtually unable to influence tariffs, and the government loses its rents. A government benefitting from rent-seeking may nevertheless liberalize trade for two reasons. First, technological or economic changes make pro-trade interest groups more powerful than protectionist interests (Rodrik, 1994; Tornell, 1995; Acemoglu, Johnson, and Robinson, 2005). By liberalizing trade, the administration in office can then earn a one-off reward from pro-reform interest groups. It may do so if this reward is larger than the loss of

⁸ For more references to literature related to endogenous tariffs, see Magee et al. (1989: 32).

political support from protectionists. Once trade is liberalized, the government will no longer earn any rents from lobbying over tariffs, but this may not matter if the one-off reward is high enough. The fact that future governments will not enjoy any rents should not concern the people currently in power. Second, the government may liberalize if pressure for liberalization emerges from outsiders from whom the government cannot extract rents. For small and politically weak countries in particular, it may be a political imperative to adhere to the voices of foreign governments, academics, independent opinion makers, and other interests.

Wherever the pressure for change comes from, EPZs offer a way for the government to provide liberalization while still collecting rents. EPZs divide the country into areas with free trade and an economy that remains protected from international competition. They thus allow the government to grant trade liberalization to exporting manufacturing industries that rely on imports, and still maintain trade protection for import-substituting industries. EPZs thus make all interest groups better off by granting them trade policies closer to their preferences (Rodrik, 1999: 46).⁹

The potential payoff to a government introducing EPZs rather than broader liberalization provides a strong incentive. With EPZs, protected import-substitution firms

⁹ In the long run, firms in import-substituting industries should be neither better nor worse off with EPZs. As Tullock (1975) suggests, any benefit that they obtain from protectionism is eventually dissipated by the competition over their profits from other entrants to the industry. It matters little, therefore, if import-substituting industries lose out due to higher tax bills. This may happen as domestic firms become EPZ exporters and contribute less to the government in taxes and tariffs, so that taxes need to rise elsewhere to compensate. Yet, even if the industry does not benefit from protectionism in the long-run the firms would in lose out in the short-term from liberalization.

still lobby the government for tariffs, because they cannot count on the government keeping them high otherwise. The voting public does after all exert some indirect pressure on the government to keep domestic prices down (Caves, 1976; Grossman and Helpman, 1994).¹⁰ Meanwhile, the government enjoys the fruits of liberalization. If the pressure to liberalize comes from domestic exporters, the government obtains a one-off reward from them, just as it would if it liberalized the economy more generally. If the pressure comes from outsiders, EPZs can silence their criticism.

Pro-trade interests may accept EPZs as a step in the right direction, even though the zones are not everything they want. Domestic interest groups that advocate liberalization should care little that the rest of the country remains protected. If they can purchase their production factors abroad tariff-free, they are not affected by high domestic prices. Outside pressure groups may also accept EPZs as a satisfactory solution. The protectionist government can, after all, market the scheme as a policy for trade liberalization, as well as to obscure to its voters that EPZs may impose costs on them in the form of higher tax rates.

EPZs tend to persist for the same reason governments create them. Governments support the scheme for fear of otherwise having to liberalize the economy and lose their rents from the import-substituting industry. The administration that would abolish EPZs

¹⁰ Empirical support for these models are presented, for instance, by Gawande and Bandyopadhyay (2000), who show that the US government seems to weigh the interests of lobbying interest groups and consumers equally. Political economy case studies on the formation of tariffs also include Marvel and Ray (1983), Mayer (1984), Pincus (1975), and Riedel (1977).

would also suffer a loss of political support from the manufacturing exporters. This potential loss of support becomes an increasingly important reason to preserve the EPZs as the sector grows in size and political clout.¹¹ EPZ programs thus persist for political reasons, independently of whether they actually are economically beneficial.

2.2 A Model of Endogenous Tariff Formation

To illustrate the role of EPZs in rent-seeking, I first consider the incentive of interest groups to lobby for tariffs in the absence of EPZs. Next, I examine the changes to the model that the presence of EPZs implies.

2.2.1 Endogenous Tariff Formation without EPZs

A model of endogenous tariff formation illustrates how tariff rates emerge as a result of the profit-maximizing behavior of different actors (Magee et al., 1989: 31). As proposed by Findlay and Wellisz (1982), we may divide interest groups between two kinds of industries: (1) manufacturing exporters that rely on imports, and thus prefer lower import tariffs and export subsidies; and (2) import-substituting firms, which want higher import tariffs and other forms of trade protection to raise prices on the domestic

¹¹ The reasoning supports the observation that lobbying creates increasing returns to factor endowments. An industry with more resources can devote these to political support for policies in favor of the industry (Choi and Magee, 1997: 120). The price effect that results increases their return to capital in production.

market.¹² Import-substituting firms lobby for import tariffs that protect their particular line of production, and exporters lobby against tariffs. This system of free competition for tariffs is what Magee, Brook, and Young (1989) call an “invisible foot economy.” Self-interested actors under free competition are, to paraphrase Adam Smith, led by an invisible foot to compete for rents, which has unseen costs on the economy as a whole.

The public also exerts pressure on the government against raising tariffs. There will thus always be pressure to keep tariffs down that work against the interests of the import-substitution industries. I will however assume that the public pressure is constant and therefore does not enter the model directly. This is to keep the model simple so that I can focus my analysis on the lobbying dynamics between industrial interest groups.

Firms in import-substituting industries lobby for higher tariffs that raise domestic prices, and exporters lobby for lower tariffs so as to lower their input costs. I assume that industries can internally solve their collective action problem (Olson, 1965), such that the firms can lobby as a group in a way that maximizes their aggregate profits.

The world price, p_W , represents the ratio of exogenous world prices of import-substituting products to export products. It is thus an inverse measure of the country’s terms of trade, with the exporters’ products priced at unity. The relation between domestic prices, p_D , and world prices of imports is $p_D = p_W\tau$, where τ represents one plus the tariff rate, and $\tau > 0$. The tariff rate can thus be negative, which allows for

¹² This is in line with the Ricardo-Viner model of endogenous tariffs. By contrast, the other class of models, the Stolper-Samuelson models, divides interest groups along factor lines, between capital owners and labor (Choi, 1991: 2).

import subsidies. The government maximizes its rents by setting tariffs to respond to lobbying. I propose the following function for the tariff, to reflect diminishing returns to lobbying:

$$\tau = \sqrt{L_{IS}/L_{EX}} \quad (1)$$

L_{IS} and L_{XL} are the number of people the import-substituting firms and the manufacturing exporters employ to lobby. The profit for an exporter, Π_X , is

$$\Pi_X = Z_X I_X^\beta - p_D(L_{IS}, L_{XL}) I_X - L_{XL} \quad (2)$$

where Z_X represents the industry's productivity, and I_X the production factors that the exporter must either import or purchase from import-substituting industries. The variable p_D is a function of L_{IS} and L_{XL} . I assume that the wage of lobbyists is exogenous and set it to unity. An exporting industry maximizes profits with respect to inputs and lobbyists, with the following first-order conditions.

$$\frac{\partial \Pi_X}{\partial I_X} = \beta Z_X I_X^{\beta-1} - p_D = 0 \quad (3)$$

$$\frac{\partial \Pi_X}{\partial L_{XL}} = -\frac{\partial p_D}{\partial L_{XL}} I_X - 1 = 0 \quad (4)$$

Substituting the first equation into the second, and inserting $p_W \sqrt{L_{IS}/L_{EX}}$ and its derivative yields the level of lobbying by the export industry as a function of lobbying by exporters and other exogenous variables (see Mathematical Appendix):

$$L_{XL} = p_W^{\frac{2\beta}{3\beta-2}} L_{IS}^{\frac{\beta}{3\beta-2}} \left(\frac{1}{\beta Z_X} \right)^{\frac{2}{3\beta-2}} 2^{\frac{2-2\beta}{3\beta-2}} \quad (5)$$

Presumably, β is close to unity with almost constant returns to scale, since the production function only includes one production factor. As long as $\frac{2}{3} < \beta < 1$, we can

interpret the result as follows. Better terms of trade encourages less lobbying. With higher relative prices on their products relative to their inputs, export industries are better off increasing output than lobbying to lower their input costs. Higher productivity and return on factors of production mean less lobbying, because they increase revenues from investing in production as compared to lobbying. Finally, lobbying by import-substituting firms compels the export industry to respond with more lobbying of its own.

The profit, Π_I , of an import-substituting firm is

$$\Pi_I = p_D(L_{IS}, L_{XL})Z_I L_{IW}^\alpha - wL_{IW} - L_{IS} \quad (6)$$

The number of workers in the import-substituting industry's production is L_{IW} .

The variable Z_I represents productivity and w the ratio of workers' relative wages to the cost of hiring lobbyists. Supposing the interest groups engaged in tariff-formation disputes constitute a small part of the economy, I assume wages are exogenous and constant. An import-substituting industry maximizes profits with respect to workers in production and lobbyists, yielding the following first-order conditions.

$$\frac{\partial \Pi_I}{\partial L_{IW}} = P_D \alpha Z_I L_{IW}^{\alpha-1} - w = 0 \quad (7)$$

$$\frac{\partial \Pi_I}{\partial L_{IS}} = \frac{\partial P_D}{\partial L_{IS}} Z_I L_{IW}^\alpha - 1 = 0 \quad (8)$$

Substituting the first equation into the second and inserting $p_W \sqrt{L_{IS}/L_{EX}}$ and its derivative yields the level of lobbying by the import-substituting industry as a function of lobbying by exporters and other exogenous variables (see Mathematical Appendix).

$$L_{IS} = \left(\frac{1}{P_W Z_I}\right)^{\frac{2}{2\alpha-1}} \left(\frac{w}{\alpha}\right)^{\frac{2\alpha}{2\alpha-1}} 4^{\frac{1-\alpha}{2\alpha-1}} L_{XL}^{\frac{1}{2\alpha-1}} \quad (9)$$

The constant α should be close to unity, since the production function only includes labor as a factor of production. As long as $0.5 < \alpha < 1$, we can interpret the function as follows. The negative effect of p_W means that higher terms of trade encourages lobbying. That is because lower world prices on import-substituting industry products decrease domestic prices as long as the tariff is held constant. This encourages the industry to try to raise domestic prices via tariffs. Furthermore, higher productivity and return of labor to production mean less lobbying. With investments in production having higher returns than lobbying, companies invest more in the former. Also, a higher relative wage for lobbyists induces less lobbying. Finally, if the export industry lobbies more, it compels the import-substituting industry to respond with more lobbying.

Both import-substituting and export industries lobby more when they are less efficient and have lower returns on capital or labor. This coincides with the finding of Lee and Swagel (1997) that weak and declining industries tend to enjoy greater protection. Better terms of trade makes import-substituting firms lobby more and exporters less. This observation is consistent with the empirical findings of Magee and Young (1987: 167) that increased terms of trade tends to raise the equilibrium tariff. Finally, because both $\alpha < 1$ and $\beta < 1$, both interest groups respond exponentially to the other side's lobbying. The industries' lobbying reaction curves thus have shapes similar to those drawn in Figure 1.

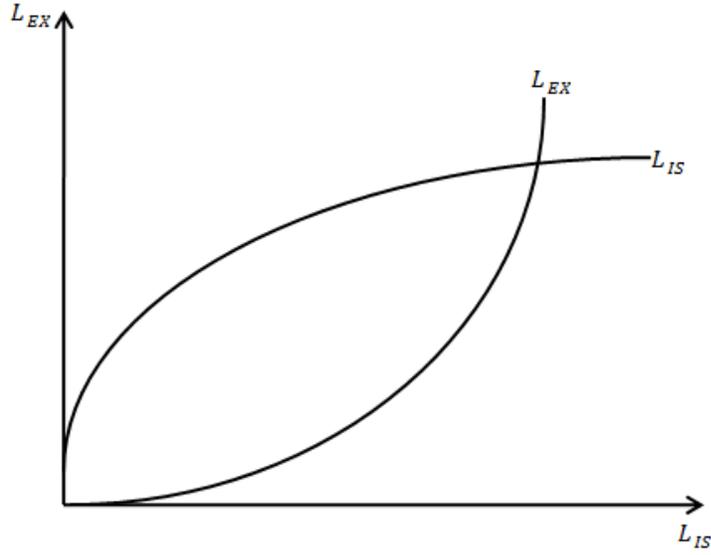


Figure 1: Reaction curves of the interest group's lobbying

2.2.2 Endogenous Tariff Formation with EPZs

As this part of the model shows, EPZs remove the incentive of their exporters to lobby. Because EPZs preserve at least some of the incentive of import-substitution firms to lobby, they are nevertheless better than trade liberalization for the government. EPZs let the exporters import their factors of production tariff-free. Exporters can choose between buying inputs from import-substituting firms at domestic prices, and importing them from abroad at international prices. Their profit function can therefore be expressed as

$$\Pi_X = Z_X I_X^\beta - \gamma p_D(L_{IS}, L_{XL}) I_X - (1 - \gamma) p_W I_X - L_{XL} \quad (10)$$

Here, γ is the share of inputs that the industry purchases domestically. As previously, $p_D(L_{IS}, L_{XL}) = p_W \sqrt{L_{IS}/L_{EX}}$. Independent of the level of the tariff, the

optimal strategy for the exporters is to set $\gamma = 0$. Because the domestic price is therefore irrelevant for exporters, they do not lobby for lower tariffs. Hence, the export industry maximizes profits by investing in its production only (see Mathematical Appendix).

$$I_X = \left(\frac{\beta Z_X}{p_W}\right)^{\frac{1}{1-\beta}} \beta \quad (11)$$

$$L_{XL} = 0 \quad (12)$$

In the absence of lobbying by the export industry, the profit function of the import-substituting industry is

$$\Pi_I = p_D(L_{IL})Z_I L_{IW}^\alpha - wL_{IW} - L_{IS} \quad (13)$$

where p_D is a function of L_{IL} only. If we restate the tariff function as $\tau = \sqrt{L_{IS}}$, the optimal level of lobbying by the import-substituting industry is as follows (see Mathematical Appendix):

$$L_{IS} = \left(\frac{1}{P_W Z_I}\right)^{\frac{2}{2\alpha-1}} \left(\frac{w}{\alpha}\right)^{\frac{2\alpha}{2\alpha-1}} 4^{\frac{1-\alpha}{2\alpha-1}} \quad (14)$$

This function is identical with the non-EPZ solution for the import-substituting industry, except for the absence of lobbying by exporters. The model implies that the government's stream of rents probably is lower than in the "invisible foot" scenario of tariff competition. It loses the rent-seeking revenue from the exporters, who get their preferred tariffs for free. It either loses or gains rents from import-substituting industries. They may find that they need to lobby less to obtain high tariff rates. However, they might also increase their lobbying, since it is more effective when exporters do not oppose rate rises. Import-substituting industries are, however, unlikely to spend as much

on lobbying as they and the export industries were previously spending together—hence, the government’s lower rents.¹³

The loss of rents for the government due to the introduction of EPZs does not mean that it is irrational to introduce them.¹⁴ As I previously explained, the government may want to move toward liberalization to gain a one-time reward from powerful pro-trade interests, or to appease its outsider-antagonists. In comparison to losing all its rents by liberalizing trade, introducing EPZs looks like a bargain.

2.3 Understanding EPZ Benefits

The model of endogenous tariff formation helps us understand both when and how EPZs can benefit a country. First, when do EPZs benefit an economy? Compared to free competition for tariffs, EPZs encourage businesses to invest more in production and less in lobbying. This is good for the economy. However, EPZs can also be used to avoid broader liberalization, which would further decrease rent-seeking and force import-substituting firms to be more efficient (Baldwin, 1969). Broader reforms would also avoid the economic distortions through misallocation of resources that EPZs cause

¹³ Whether the import-substituting firms spend more on lobbying or not, tariff rates should rise with EPZs, according to the endowment theory of endogenous tariffs of Magee, Brock, and Young (1989). After removing the exporters from the tariff-formation picture, those invested in import-substituting production have more political power and thus obtain a higher tariff rate.

¹⁴ If wages were allowed to change, they might counteract the loss of rents to the government. If international investors join the export sector, the demand for labor, and hence the wages of workers, increase. If the cost of lobbyists does not rise to the same extent, as these services may be traded internationally, this should induce more lobbying.

(Hamada, 1974). Economically speaking therefore, EPZ are a second-best solution after more general trade liberalization (World Bank, 1992; Rodrik, 2013).

Thus, whether EPZs avoid or promote trade liberalization depends on what the government would institute in their place. We may recall the reasons why a government wants to move toward liberalization. It may either be attracted by a one-off reward from a pro-trade lobby, or pressured politically by outsiders such as other governments, academics, and opinion makers. The pro-trade interests may find EPZs an insufficient form of liberalization, and deny the government the benefits it expects from liberalization. Whether a rejection of the EPZs is good or bad for the economy depends on the government's subsequent actions. Abolishing its EPZ plans, it may move toward either more or less liberalization. If the government introduces broader liberalizing reforms, the EPZs would have been a way to avoid liberalization. They would not have served the welfare of the people in that case. If a rejection of the EPZs instead means that the government preserves protectionism and finds other ways to appease pro-trade interests, such as subsidies and bribes, then EPZs would have been better for the country

as a whole. In short, EPZs are beneficial if their political alternative is more protectionism.¹⁵

The model also reveals how EPZs do or do not benefit an economy. They discourage wasteful lobbying and encourage production, which generates a higher rate of employment and more exports. However, they also discourage EPZ exporters from purchasing material domestically.¹⁶ When exporters buy inputs and services from the domestic market, this encourages new investments countrywide. Such “backward linkages” are an often-cited benefit with EPZs (FIAS, 2008: 37; Aggarwal, 2007: 14).¹⁷ However, because EPZs discourage rather than encourage such linkages, they are unlikely to form.

The expectation of EPZs to serve as locomotives for countrywide growth by creating backward linkages is rarely met because the price wedge between goods when imported and supplied by import-substituting firms discourages the formation of linkages

¹⁵ In contrast to Special Economic Zones, EPZs cannot bring reforms by serving as showcases for more liberal policies (FIAS, 2008: 42; Madani, 1999: 53). The Chinese Special Economic Zones were showcases, in that they prove false the ideological preconception of capitalism as a force that would cause “spiritual pollution” in socialist China. Reform supporters could point to the success of the Shenzhen and other zones and argue for the need of further liberalization (Crane, 1990: 94; van Wijnbergen and Willems, 2014). As fiscal schemes, EPZs do not differ from the rest of the country by ideology or regulatory system. They do not, therefore, serve as models for how a country may be governed as a whole.

¹⁶ Another form of linkage is technology transfers. They are supposed to occur when multinational firms collaborate with domestic companies. Yet, the prevalence of technological transfers may be small, and they are inevitably hard to measure (Basile and Germidis, 1984; Schrank, 2008: 1381; Rhee et al., 1990: 3; Aggarwal, 2007: 13).

¹⁷ This argument for EPZs rests on Albert O. Hirschman’s theory of the development potentials of “unbalanced growth”, where investment in one sector pulls the rest of the economy along by inducing investments elsewhere (Hirschman, 1958).

between EPZs and the rest of the economy. EPZ exporters obtain their production factors more cheaply from abroad than from the domestic market when they are exempted from tariffs (Subramanian and Roy, 2001: 18). An exporter of shoes may for instance buy leather domestically as long as the tariff on leather makes up the difference between the lower foreign price and the domestic price. When exempt from the tariff, it turns to the international market for supplies.

Though observers often see backward linkages as the benefit of EPZs that in the long run brings about development, their absence rather divides the economy to an increasing extent. Because the regime guarantees import-substituting firms higher prices for their goods domestically than internationally, these firms lack the incentive to improve their quality and lower their prices to international levels. EPZ exporters, by contrast, must keep up with the growing sophistication of their international competitors. The result is a divide in sophistication between EPZ exporters and import-substituting firms. This gap in sophistication further diminishes the chance that EPZ exporters will turn to import-substituting firms for inputs.

The rest of this paper will look at the EPZs in the Dominican Republic as an illustration of zones instituted as a rent-seeking scheme and preserved thanks to their growing political importance. The Dominican case also shows how EPZs create a divided economy and therefore fail to promote economic development.

2.4 The Export Processing Zones in the Dominican Republic

EPZs are particularly popular in Latin America, where low wages, natural resources, and access to the United States market attract investors from all over the world

(Jenkins, et al., 1998; Farole and Kweka, 2011; Farole, 2012: 2). The prominence of Dominican EPZs makes them a good representative of EPZ schemes in Central America. In El Salvador, Guatemala, Honduras, Nicaragua, Costa Rica, and the Dominican Republic, EPZs generate 40 percent or more of national exports. Except for Guatemala, these EPZs employ 4 to 7 percent of the countries' active work force (Jenkins et al., 1998; Rodriguez-Clare, 2001; CNZFE, 2014; Farole, 2012: 7). Along with Costa Rica, the Dominican Republic has also seen a broad diversification of EPZ production (Farole, 2012: 4).

Despite the apparent benefits, the EPZs also illustrate the less sanguine aspects of EPZs presented in this paper. The zones came about as a rent-seeking tool, and it seems as though the justification for their persistence is more political than economic. The Dominican case also exemplifies how EPZs form “pockets of excellence” that have failed to integrate with an otherwise underdeveloped economy (Kaplinsky, 1993; Farole, 2011a; Sánchez-Ancochea, 2012).

2.4.1 The Introduction of the Dominican EPZs

President Joaquín Balaguer introduced the Dominican EPZs in the late 1960s. Before him, Rafael Trujillo had ruled the country for three decades until his assassination in 1961. Trujillo exploited his position to become the country's main investor, controlling over 80 percent of Dominican industrial production at the end of his reign (Haggerty, 1989; Pons, 2010: 362–65). He imposed high tariffs on protected sectors, which destroyed the emergence of many local industries. Dominican manufacturing thus grew slower than that in other Latin American countries. The only industry that clearly

benefited from Trujillo's liking was sugar, in which he concentrated much of his investment (Haggerty, 1989; Betances, 1995: 107; Pons, 2010: 364).

At the end of the 1960s, the country was enjoying an economic upswing. This was largely due to US foreign aid and high prices for sugar, the country's main export at the time (Black, 1986: 44, 63; Pons, 2010: 399). However, it was also thanks to Balaguer backing away from many of Trujillo's destructive policies. Balaguer's industrial support went beyond the sugar industry, for instance, and he did not, like Trujillo, demand that domestic producers use domestic raw materials (Pons, 1990: 561; Betances, 1995: 120; Schrank, 2003a: 95). With the economic upswing came higher incomes, and with them, increased demand for imported goods. This tends to lead to more protectionism (Trefler, 1993). The Dominican import-substituting industries put pressure on Balaguer to protect them from the imported goods, and he responded by strengthening the import-substitution regime (Fiallo, 1973: 162; Schrank, 2003b: 423). Compared to the Trujillo-era concessions to individual import-substituting firms, Balaguer made trade protectionism more systematic (Hartlyn, 1998: 104).

Protectionist policies were however losing in popularity in Latin America, which meant that Balaguer faced a pressure to liberalize that Trujillo never encountered. Critics at home protested ever-more loudly against Balaguer's protectionism (Hartlyn, 1998: 105). The United States also started pressuring Balaguer to liberalize trade, and Balaguer was in no place to refuse its demands. Not only was the United States a crucial trade partner and aid donor. The president owed the very existence of his regime to previous military interventions by the United States that made sure that the government would

pursue its interests (Nanda, 1966; Betances, 1995: 118; Schrank, 2003b; Pons, 2010: 398, 402). Trade openness would, however, lessen the rents that Balaguer enjoyed from the import-substituting industries (Schrank, 2003a: 95).

The EPZs were Balaguer's response to this situation. In 1968, he introduced a law that sorted import-substituting firms and exporters into different benefit schemes. For the first time, import-substituting firms received substantial and systematic tariff protection, as well as additional benefits, which allowed them to monopolize the domestic market (Haggerty, 1989; Betances, 1995: 121; Schrank, 2005: 46). Meanwhile, the scheme granted exporters tariff and tax benefits if they invested in EPZs (Schrank, 2003a: 97). The EPZs thus saved Balaguer from having to introduce broad reforms. He could maintain his give-and-take relationship with the import-substituting industries, while claiming that he was promoting economic openness.

2.4.2 Dominican EPZ Persistence

Any government that would try to return to the rent-seeking regime of old by abolishing the EPZs would face two main problems. First, it would lose a lot of political support. While the EPZ sector was initially small and politically weak, it soon grew in both size and power. Second, it would actually risk having to liberalize trade more substantially. Since joining the World Trade Organization (WTO) in 1995, the Dominican government has lost much wiggle room to use tariffs to collect rents. I will look into these reasons for EPZ persistence in turn.

EPZ growth has made the sector an important political player. During their first decade, the zones hosted only a few, primarily foreign, companies (Schrank, 2003a: 101).

The sector began to grow in the 1980s. Between 1981 and 1989, the number of EPZ companies grew from 89 to 317, the number of employees from 20,500 to 110,000 people, and the EPZ share of national exports from 3 to 35 percent. In 2001, their share of exports reached a peak of 85 percent. The number of employees was the highest in 2000, with 195,000 people. By 2003, the EPZs contributed 7.5 percent to national GDP (Rhee et al., 1990: 14; Kaplinsky, 1993: 1855; CNZFE, 1992; 2013).

Larger size brought more political influence.¹⁸ In 1988, to strengthen their political clout, EPZ firms and developers formed ADOZONA (La Asociación Dominicana de Zonas Francas), which became the main lobby organization for EPZ companies and zone operators (ADOZONA, 2014). Within a decade, ADOZONA became a powerful and popular voice in making the case for the EPZ model (personal interview). Figure 2 illustrates the growth of the Dominican EPZs and EPZ employment.

¹⁸ The growing government adherence to the EPZ sector's interests is reflected in laws enacted in the EPZs' favor. The government expanded their benefits in the 1980s (Betances, 1995: 128). In 1990, fiscal reforms abolished old tax exemptions to make the economic system less distortive, yet they exempted the EPZs from any changes (WTO, 1996: xiii). In 1988, EPZ companies demonstrated their political influence in altering how the authorities allocated MFA textile quotas. The National Free Zone Council (CNZFE) practiced a discretionary quota allocation that was inherently corrupt and unpredictable. EPZ companies then managed to claim six seats on the council's board, which allowed them to change the quota allocation system to one based on previous export performance. They thereby restricted the competition for export quotas to incumbent EPZ companies (Schrank, 2003a: 105).

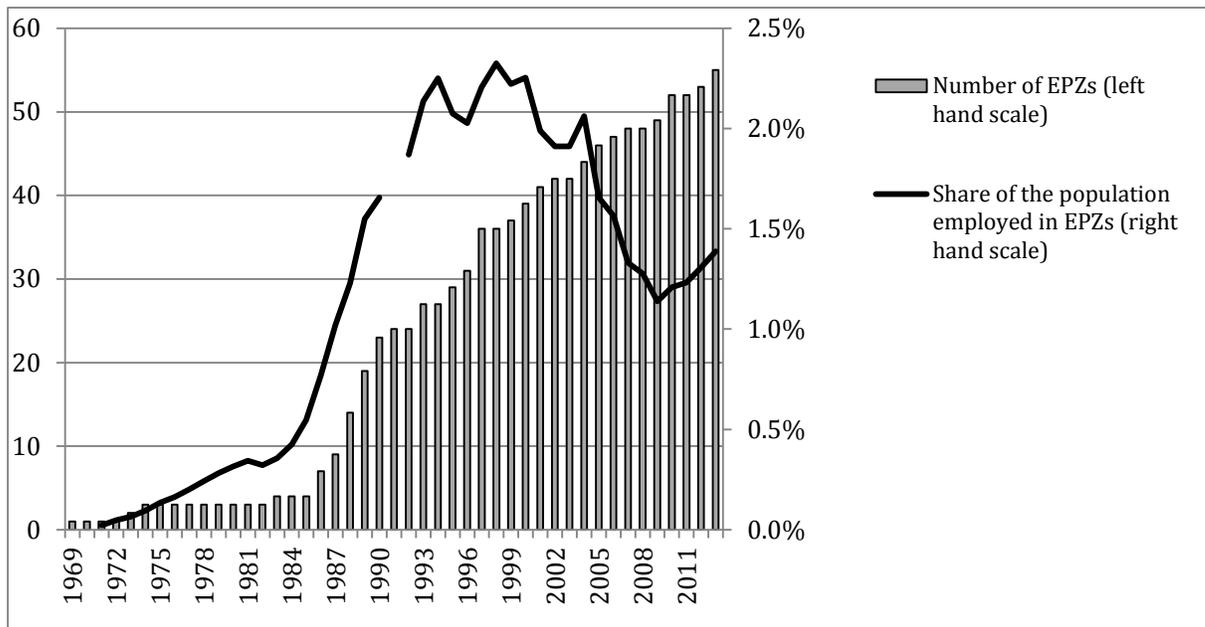


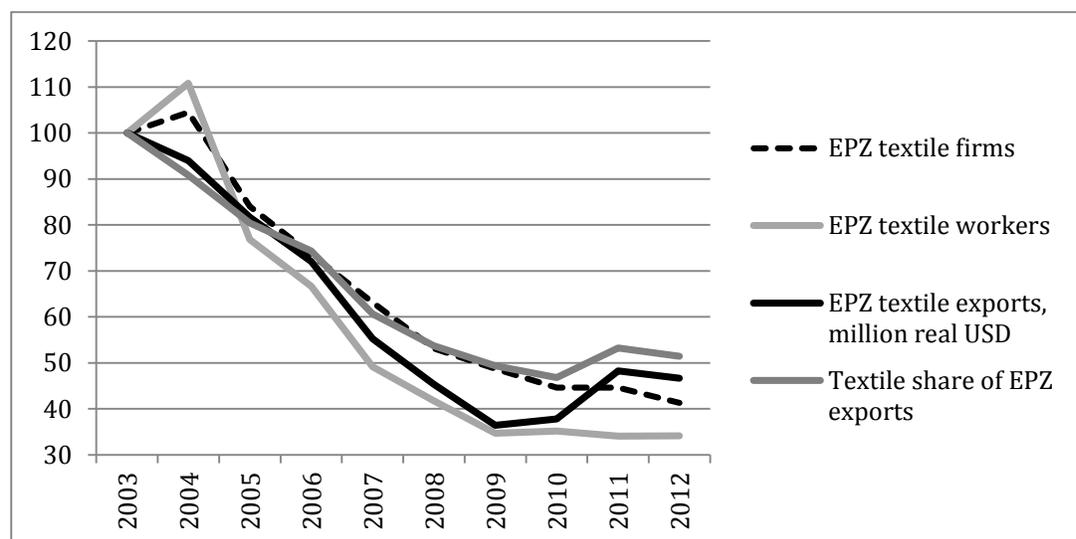
Figure 2: The number of EPZs and share of the population employed in the EPZs.

The government thus has a strong incentive to protect the EPZ model. A recent period of crisis shows just how important EPZs have become for the government. As Figure 2 reveals, EPZ employment decreased rapidly after 2004. This was due to a decline in the all-important textile industry. It began with the introduction of NAFTA in 1996 and became acute with the end of the Multifibre Arrangement (MFA) (Hartlyn 1998: 140; Burgaud and Farole, 2011).¹⁹ Since 1974, the MFA had governed international trade in textiles and apparel with a system of import quotas. These quotas

¹⁹ The North American Free Trade Agreement (NAFTA) saw the light of day in 1994. The Caribbean Basin Initiative (CBI) had shielded Caribbean countries from much Mexican competition on the United States market, but with NAFTA, they found themselves at a disadvantage to Mexico. Textile manufacturers throughout the Caribbean Basin closed as a result (Pregelj, 2005; Schrank, 2005: 54).

shielded Latin American textile producers from East Asian and Indian competition in the US market (Waglé, 2005). Many Dominican textile companies could thank this artificial comparative advantage for their existence (Mortimore, 2003). A decade of phasing out of the quota system began in 1994. When it finally ended in 2004, many US textile companies, who had been outsourcing sewing to Latin America, turned to Asia instead (Waglé, 2005; CNZFE, 1995; personal interviews).

Between 2004 and 2010, the number of textile companies in the EPZs fell from 281 to 120, and the share of EPZ textile exports from 45 to 23 percent (CNZFE, 2004; 2010). In 2000, 142,000 people were employed in the EPZ textile industry in the Dominican Republic. Their number dropped to only 40,500 in 2011 (CNZFE, 2000; 2011). Once the country's main job creator, the EPZs became the center of rapidly increasing unemployment. Figure 3 illustrates the decline of textiles.



Index 2003: 100. Source: CNZFE.

Figure 3: Index of the decline of the free-zone textile industry.

The response of the government reveals its imperative to save the EPZ sector. After a few years of the decline, the government started offering new benefits. In 2007, it granted subsidized loans to qualifying EPZ textile companies. For a period, it also extended subsidies to all EPZ companies of about \$50 per worker per month, a sum equivalent to 30 percent of the Dominican minimum wage (personal interviews). The government also extended EPZ benefits to all the country's companies in the textile, clothing, shoe, and leather manufacturing businesses.²⁰ The measure intended to induce domestic textile manufacturers to absorb laid-off EPZ workers and thereby mitigate the effects of the decline (personal interviews). Taken together, these new measures evidently aimed at saving the textile industry, stemming the rising unemployment, and boosting the EPZ program as a whole.

In addition to the EPZs' political importance, another good reason for the government to preserve them is that WTO membership makes it unlikely that a Dominican government could return to "invisible foot"-style tariff determination. When joining the WTO in 1995, the country capped its tariffs at 40 percent, with higher tariffs on eight agricultural goods (WTO, 1996: xv). These rates were significantly higher in the 1980s, when some tariffs reached 350 percent. The government even introduced an import ban on one hundred agriculture products in the late 1980s (Haggerty, 1989). The

²⁰Congress (Congreso Nacional), 2007, Law 56-07 (Ley No. PI-56-07, que declara de prioridad nacional los sectores pertenecientes a la cadena textil, confección y accesorio; pieles, fabricación de calzados de manufactura de cuero y crea un régimen nacional regulatorio para estas industrias), accessed Mar. 21, 2014, <http://www.cnzfe.gob.do/ingles/marcolegali.html>.

WTO tariff caps make it unlikely that the government would attract much rent if it would again open up for tariff competition between interest groups. Its best strategy is therefore to stick with the EPZ model.

The WTO, however, threatens even the government's current EPZ scheme. The organization prohibits its members from engaging in export subsidies, to which the Dominican EPZs count.²¹ By December 2015, the Dominican Republic must stop giving fiscal benefits to its exporters. To comply and still avoid the loss of political support from EPZ exporters, the Dominican government could abolish the EPZs and introduce low tariffs and corporate taxes for all companies. That would however cause the government to lose both fiscal revenue and the rents it now enjoys from the import-substituting industry.

In this situation, the government would rather take one of two ways to preserve its rents. It may find small changes to the fiscal rules that the WTO would consider sufficient changes to the EPZ model (personal interviews). Or, it may find a new rent-seeking scheme altogether. Several countries have progressively reconstructed their EPZ

²¹ Agreement document available at http://www.wto.org/english/docs_e/legal_e/24-scm_01_e.htm. The Dominicans have already shown their reluctance to bow to WTO pressure to reform or abolish the EPZs, by postponing its deadline to meet its requirements. The WTO initially considered the Dominican Republic a "least developed country" and hence automatically exempted it from the rule to abolish export-subsidizing EPZs. The United Nations definition of a least developed country that was referred to at the time was a GDP per capita under \$1,000 in 1995 dollars. Despite increasing its GDP per capita above that benchmark, the Dominican Republic later postponed its deadline, once in 2002 and later in 2007. See WTO, 2002, Document G/SCM/N/74/DOM, January 8; WTO, 2007, Document G/SCM/N/163/DOM of September 14; WTO, 2007, Document G/SCM/N/160/DOM of July 5; WTO, 2007, Document WT/L/691, July 31.

schemes to be based not on exports but instead on so-called “strategic sectors.” A government then grants subsidies based on industry, rather than exports (World Bank 2014). If it were to make the list of sectors and the levels of subsidies flexible enough, this should offer several opportunities for businesses to rent-seek.

2.4.3 Understanding the Benefits of the Dominican EPZs

Studies on the Dominican EPZs praise them for creating jobs, increasing exports, and bringing about economic diversification. However, they also note that the Dominican Republic disappoints in its lack of backward linkages and they recognize a clear divide between the expanding and increasingly sophisticated EPZ sector and the rest of the economy (Kaplinsky, 1993; Burgaud and Farole, 2011: 177; Sánchez-Ancochea, 2012). An early survey of EPZ firms found no EPZ firms that bought inputs domestically. The firms reported that these were either not available, of poor quality, or too expensive (Rhee et al., 1990). Trade protection meant that import-substituting firms lacked the incentive to keep up with international competition on quality. Meanwhile, the tariff exemptions of EPZ firms made available cheaper and higher-quality production factors on the international market. Lacking demand for their products from the EPZs, some import-substituting firms even lost all reason to produce them.

Between 1996 and 2007, most EPZ sectors bought virtually all their prime material from abroad. Table 1 lists the share of domestic purchases by the current main sectors by export volume. It shows that only manufacturers of products derived from tobacco, which grows in the Dominican Republic, buy a significant share of their material from the domestic market.

Table 1: Share of prime material that Dominican EPZ firms in different sectors buy from domestic, non-EPZ companies.

	1996–2007 average	2007
Tobacco products	18.4%	20.0%
Shoes	5.7%	7.0%
Electronics	4.9%	2.4%
Jewelry	3.6%	1.3%
Textiles and	3.0%	3.4%
Medical equipment	2.0%	0.8%

Source: Central Bank of the Dominican Republic.

The EPZ sector as a whole has become more sophisticated, primarily during the last two decades. In the 1990s, Dominican EPZ production still depended on cheap labor and was dominated by textile sewing companies (Kaplinsky, 1993; Willmore, 1995; Burgaud and Farole, 2011; Godínez and Mattár, 2008: 27; Sanchez-Ancochea, 2012; World Bank, 2000: 25; Farole and Akinci, 2011: 163). Since then, EPZ production has gradually become more diversified, with higher-technology sectors and various services such as call centers.

Medical-equipment manufacturing exemplifies an important point: with increased diversification of the EPZ sector into more capital-intensive and sophisticated production, it is increasingly hard for domestic firms to sell to EPZ firms, causing the gap between EPZ producers and the domestic economy to widen. This sector took hold in the 1990s and overtook textiles in export value in 2009. These two leading sectors have since

constituted around 25 percent each of EPZ exports (CNZFE, 2012).²² Because medical-equipment manufacturing is technically advanced, the quality requirements for their production factors are high, and manufacturers purchased only 0.8 percent of inputs domestically in 2007. Another growing sector, telecom services, reported no backward linkages that year (Central Bank data).

The fall in the textile industry also made EPZ production more sophisticated, partly as textile firms went out of business, but also because Dominican textile manufacturers became more sophisticated to survive. Many textile companies took on more advanced tasks, performing more of both early and late stages of production in-house for foreign clothing brands. The Dominican Republic has an advantage to Asian manufacturers in offering such full-package solutions, not least thanks to its attractive geographical location (personal interviews). While observers generally see it as a positive trend, this increasing sophistication in apparel has promoted the divide between EPZ and import-substituting firms.

The evident lack of linkages between the EPZs and the protected domestic economy is a logical outcome of the EPZ scheme and should therefore not be a surprise. Willmore (1995: 533) stresses the great potential of Dominican domestic firms to meet the demand of EPZ firms, “if only local products were competitive in price and quality

²² Medical-equipment production in the Dominican Republic has become more sophisticated internally. Intravenous sets, which administer solutions into patients’ veins, used to dominate production. Now, multinational medical-equipment companies rely on Dominican workers for increasingly complicated tasks, including metal grinding and sterilization of equipment (interviews).

with imported goods.” Such observations reveal a misunderstanding about EPZs. The gap between what EPZ firms want and what domestic firms supply is not an anomaly but a logical result of trade protection. Import tariffs allow import-substituting firms to charge a higher price and offer a lower quality than their international competitors. If they lived up to the EPZ requirements, they would not need trade barriers. As the EPZ exporters do not rely on domestic producers for inputs, they do not need domestic firms to keep up with their increasing sophistication. Rather than encourage domestic firms to upgrade, EPZ firms move further away from them.

Professionals at the Dominican export-promotion agency (CEI-RD) bear witness to this logic. They encourage and train domestic producers to venture out on the international market. They tell of a widespread reluctance of domestic firms to make the necessary investments to become exporters. The firms are simply “too comfortable” on the Dominican market (personal interviews). The domestic firms’ protected status explains why they lack the incentive to upgrade and why they prefer to stay on the home market (Schrank, 2005: 55; Burgaud and Farole, 2011: 178).

Accordingly, while the EPZs have generated jobs and exports, few, if any, signs show that they spread economic development beyond their borders. The rise of the EPZs in the 1980s happened at a time of economic stagnation in the country, with the government turning to the IMF for loans (Betances, 1985: 129; Black, 1986: 143). Socioeconomic trends were no better. Unemployment stayed consistently between 19 and

25 percent in the 1980s and 1990s. While 18 percent of the population was classified as poor in 1986, that figure rose to over 20 percent in 1992 (Hartlyn, 1998: 143–44).²³ Also, while the Dominican EPZs grew increasingly sophisticated, the country at large remained fairly underdeveloped. By 2014, 62 percent of the non-EPZ workforce remained in the sectors classified as of low productivity, namely agriculture, trade, and simple kinds of services (Central Bank, 2014; Sánchez-Ancochea, 2012: 222).

The best case to be made for the Dominican EPZs is that their best political alternative would have been worse. Recall the situation faced by President Balaguer in the late 1960s. He relied heavily on the import-substituting sector for much of his support, and may never have allowed broader liberalization at their expense. Had his domestic critics and the US government not accepted the EPZs as a sufficiently liberal reform, Balaguer may have come up with another way to please them that would entail less liberalization. Therefore, the EPZs did possibly bring about more trade liberalization than would otherwise have been possible. If the mark of EPZ success is being better than the alternative, the Dominican EPZs do perhaps belong in the category of good development policies.

²³ The dismal effect on the economy at large may in part be due to EPZs growing at the expense of the domestic economy. The EPZs were initially dominated by American companies, but many Dominican firms then left the domestic market to become EPZ exporters (Kaplinsky, 1993: 1856; CNZFE, 2013). As the EPZs started to expand in the 1980s, the rest of the economy lost 11,000 manufacturing jobs (Hartlyn, 1998: 139).

2.5 Final Remarks

EPZs illustrate how rent-seeking schemes can promote liberalization. A government collecting rents through its protectionist policies can use EPZs to benefit from liberalization while preserving much of its rent from domestic protected firms. As my model of endogenous tariff formation illustrates, import-substituting firms and manufacturing exporters have the incentive to lobby the government over tariffs. With EPZs, exporters will no longer do so, but import-substituting firms will. Because EPZs offer governments an alternative to protectionism, they may work for the benefit of a country by introducing more liberalization than would otherwise be politically possible.

Compared to a highly protectionist regime, EPZs are a step in the right direction. But they will disappoint those expecting a government to use EPZs to pursue broader reforms.²⁴ Because EPZs encourage exporters to buy their inputs from abroad, they also tend to disappoint those who expect EPZs to bring economic development via backward linkages. The benefit of EPZs is that they bring marginal improvements to a country's trade regime by improving conditions for exporters. This, however, depends on the EPZs not being used to avoid liberalization, in which case they do not benefit an economy. In

²⁴ In many countries, the timing of EPZ introduction has coincided with the rise of export manufacturing. Several East Asian countries introduced zones in the 1960s and 1970s, as their industrialization took hold. Most African countries only introduced theirs in the 1990s, and have also increased their export manufacturing much later (Young, 1994; Farole, 2011: 68; World Bank data, WB Indicators). This correlation promotes EPZs' reputation as drivers of industrialization and export diversification. Economic diversification and industrialization has, however, taken place also in the absence of EPZs. The framework presented here suggests that the cause of the simultaneity of EPZs' introduction and economic diversification is different. Governments have the incentive to introduce EPZs as a response to political pressure for liberalization that results from export-manufacturing growth.

contrast to EPZs, broader liberalization incentivizes import-substituting firms to become internationally competitive. A government with a genuine interest in broad economic reform is therefore unlikely to use EPZs.

Beyond its discussion of trade protectionism, this paper may illuminate the effects of other rent-seeking policies. For instance, many governments use fiscal benefits to particular firms to reward them for their lobbying efforts (Coyne and Moberg, 2014). Akin to EPZs, such schemes promote some new business activities, but may also be a way for the government to nurture rent-seeking by avoiding less distortive general tax cuts and reforms. Governments may nevertheless be credited for pursuing a low-tax regime. One should never be too quick to judge the intention of a government by the outcome of its policies.

2.6 Mathematical Appendix

Firms in the export industry have the following profit function:

$$\Pi_X = Z_X I_X^\beta - p_D(L_{IS}, L_{XL})I_X - L_{XL} \quad (15)$$

They maximize profits with respect to inputs to production and lobbying.

$$\frac{\partial \Pi_X}{\partial I_X} = \beta Z_X I_X^{\beta-1} - p_D = 0 \quad (16)$$

$$\frac{\partial \Pi_X}{\partial I_X} = \beta Z_X I_X^{\beta-1} - p_w(L_{IS}/L_{XL})^{0.5} = 0$$

$$I_X = \left(\frac{\beta Z_X L_{IS}^{-0.5} L_{XL}^{0.5}}{p_w} \right)^{\frac{1}{1-\beta}}$$

$$\frac{\partial \Pi_X}{\partial L_{XL}} = - \frac{\partial p_D}{\partial L_{XL}} I_X - 1 = 0 \quad (17)$$

$$\frac{\partial \Pi_X}{\partial L_{XL}} = 0.5p_W L_{IS}^{0.5} L_{XL}^{-1.5} I_X - 1 = 0$$

$$L_{XL} = L_{IS}^{1/3} (0.5p_W I_X)^{2/3}$$

Substituting the function for I_X yields

$$\begin{aligned} L_{XL} &= L_{IS}^{1/3} (0.5p_W)^{2/3} \left(\frac{\beta Z_X L_{IL}^{-0.5} L_{XL}^{0.5}}{p_W} \right)^{\frac{2}{3(1-\beta)}} \\ L_{XL}^{\frac{2-3\beta}{3(1-\beta)}} &= p_W^{\frac{-2\beta}{3(1-\beta)}} (\beta Z_X)^{\frac{2}{3(1-\beta)}} (0.5)^{2/3} L_{IS}^{\frac{-\beta}{3(1-\beta)}} \\ L_{XL} &= p_W^{\frac{-2\beta}{2-3\beta}} L_{IS}^{\frac{-\beta}{2-3\beta}} (\beta Z_X)^{\frac{2}{2-3\beta}} 0.5^{\frac{1-\beta}{1-1.5\beta}} \\ L_{XL} &= p_W^{\frac{2\beta}{3\beta-2}} L_{IS}^{\frac{\beta}{3\beta-2}} \left(\frac{1}{\beta Z_X} \right)^{\frac{2}{3\beta-2}} 2^{\frac{2-2\beta}{3\beta-2}} \end{aligned} \quad (18)$$

The import-substituting industry has this profit function:

$$\Pi_I = p_D(L_{IS}, L_{XL}) Z_I L_{IW}^\alpha - w L_{IW} - L_{IS} \quad (19)$$

It maximizes profits with respect to people hired for production and lobbying.

$$\frac{\partial \Pi_I}{\partial L_{IW}} = P_D \alpha Z_I L_{IW}^{\alpha-1} - w = 0 \quad (20)$$

$$\frac{\partial \Pi_I}{\partial L_{IS}} = P_W L_{IS}^{0.5} L_{XL}^{-0.5} Z_I \alpha L_{IW}^{\alpha-1} - w = 0$$

$$L_{IW} = (L_{IS}^{0.5} L_{XL}^{-0.5} \frac{P_W Z_I \alpha}{w})^{\frac{1}{1-\alpha}}$$

$$\frac{\partial \Pi_I}{\partial L_{IS}} = \frac{\partial P_D}{\partial L_{IS}} Z_I L_{IW}^\alpha - 1 = 0 \quad (21)$$

$$\frac{\partial \Pi_I}{\partial L_{IS}} = 0.5 P_W (L_{IS} L_{XL})^{-0.5} Z_I L_{IW}^\alpha - 1 = 0$$

$$L_{IS} = \frac{(0.5 P_W Z_I L_{IW}^\alpha)^2}{L_{XL}}$$

Substituting the function for L_{IW} yields

$$\begin{aligned}
L_{IS} &= \frac{(0.5P_W Z_I)^2}{L_{XL}} \left(\frac{P_W L_{IS}^{0.5} L_{XL}^{-0.5} Z_I \alpha}{W} \right)^{\frac{2\alpha}{1-\alpha}} \\
L_{IS}^{\frac{1-2\alpha}{1-\alpha}} &= (P_W Z_I)^{\frac{2}{1-\alpha}} W^{\frac{-2\alpha}{1-\alpha}} \alpha^{\frac{2\alpha}{1-\alpha}} 0.25 L_{XL}^{\frac{-1}{1-\alpha}} \\
L_{IS} &= (P_W Z_I)^{\frac{2}{1-2\alpha}} \left(\frac{\alpha}{W} \right)^{\frac{2\alpha}{1-2\alpha}} 0.25^{\frac{1-\alpha}{1-2\alpha}} \left(\frac{1}{L_{XL}} \right)^{\frac{1}{1-2\alpha}} \\
L_{IS} &= \left(\frac{1}{P_W Z_I} \right)^{\frac{2}{2\alpha-1}} \left(\frac{W}{\alpha} \right)^{\frac{2\alpha}{2\alpha-1}} 4^{\frac{1-\alpha}{2\alpha-1}} L_{XL}^{\frac{1}{2\alpha-1}} \tag{22}
\end{aligned}$$

With the introduction of EPZs, the profit function of exporters is

$$\Pi_X = Z_X I_X^\beta - \gamma p_D(L_{IS}, L_{XL}) I_X - (1 - \gamma) p_W I_X - L_{XL} \tag{23}$$

The first order condition of profits with respect to factors of production is

$$\frac{\partial \Pi_X}{\partial I_X} = \beta Z_X I_X^{\beta-1} - \gamma p_D(L_{IS}, L_{XL}) - (1 - \gamma) p_W = 0$$

If $\tau > 1$, exporters maximize their profits by setting $\gamma = 0$. If $\tau < 1$, exporters enjoy an import subsidy and enjoy a lower price than p_W when importing, such that $\gamma = 0$ is still the best strategy. The first-order condition collapses to

$$\begin{aligned}
\frac{\partial \Pi_X}{\partial I_X} &= \beta Z_X I_X^{\beta-1} - p_W = 0 \\
I_X &= \left(\frac{\beta Z_X}{p_W} \right)^{\frac{1}{1-\beta}} \tag{24}
\end{aligned}$$

The first-order condition of profits with respect to people in lobbying is

$$\frac{\partial \Pi_X}{\partial L_{XL}} = \gamma \frac{\partial p_D}{\partial L_{XL}}(L_{IS}, L_{XL}) I_X - 1$$

With $\gamma = 0$, this collapses to

$$\frac{\partial \Pi_X}{\partial L_{XL}} = -1$$

$$L_{XL} = 0 \quad (25)$$

In the absence of export-industry lobbying, EPZs give the import-substituting firms the following profit function:

$$\Pi_I = p_D(L_{IL})Z_I L_{IW}^\alpha - wL_{IW} - L_{IS} \quad (26)$$

As previously, the first-order condition of profits with respect to workers is

$$\frac{\partial \Pi_I}{\partial L_{IW}} = P_D \alpha Z_I L_{IW}^{\alpha-1} - w = 0 \quad (27)$$

$$L_{IW} = \left(\frac{P_D Z_I \alpha}{w} \right)^{\frac{1}{1-\alpha}}$$

With $\tau = \sqrt{L_{IS}}$, the first-order condition of profits with respect to people in lobbying is

$$\frac{\partial \Pi_I}{\partial L_{IS}} = \frac{\partial P_D}{\partial L_{IS}} Z_I L_{IW}^\alpha - 1 = 0$$

$$\frac{\partial \Pi_I}{\partial L_{IS}} = 0.5 P_W L_{IS}^{-0.5} Z_I L_{IW}^\alpha - 1 = 0$$

$$L_{IS} = (0.5 P_W Z_I L_{IW}^\alpha)^2$$

Substituting the expression for L_{IW} :

$$L_{IS} = (0.5 P_W Z_I)^2 \left(\frac{P_D Z_I \alpha}{w} \right)^{\frac{2\alpha}{1-\alpha}}$$

$$L_{IS} = (0.5 P_W Z_I)^2 \left(\frac{P_W L_{IS}^{0.5} Z_I \alpha}{w} \right)^{\frac{2\alpha}{1-\alpha}}$$

$$L_{IS}^{\frac{1-2\alpha}{1-\alpha}} = (P_W Z_I)^{\frac{2}{1-\alpha}} w^{\frac{-2\alpha}{1-\alpha}} \alpha^{\frac{2\alpha}{1-\alpha}} 0.25$$

$$L_{IS} = (P_W Z_I)^{\frac{2}{1-2\alpha}} \left(\frac{\alpha}{W}\right)^{\frac{2\alpha}{1-2\alpha}} 0.25^{\frac{1-\alpha}{1-2\alpha}}$$

$$L_{IS} = \left(\frac{1}{P_W Z_I}\right)^{\frac{2}{2\alpha-1}} \left(\frac{W}{\alpha}\right)^{\frac{2\alpha}{2\alpha-1}} 4^{\frac{1-\alpha}{2\alpha-1}} \quad (28)$$

3 WHY NO CHINESE MIRACLE IN AFRICA? SPECIAL ECONOMIC ZONES AND LIBERALIZATION AVALANCHES²⁵

Despite the importance of open markets for economic development, political elites in developing countries rarely have an incentive to reform the system (Acemoglu & Robinson, 2000; 2012, ch. 8; Haber, 2002; Kang, 2002; Rose-Ackerman, 2006; Nye 2009; Brollo et al., 2013). Public officials benefit from anticompetitive and market-distorting policies, as market actors rent-seek in the attempt to win politically granted privileges (Buchanan, Tullock and Tollison, 1980; Tullock, 1967; 2005; Mitchell, 2012). The political elites preserve the system because their gains from rent-seeking are larger than the gains from taxing an open and richer economy (Nye, 2009: 54). Rent-seeking is particularly pervasive in authoritarian regimes, but it is highly present in advanced democracies as well (Glaeser and Shleifer, 2005). In addition, although authoritarian political elites have some incentive to promote growth (McGuire and Olson, 1996; Holcombe and Boudreaux, 2013), this growth may not come to pass because they cannot credibly commit to preserve a pro-growth property rights system (Leeson, 2011). The interest of elites is thus biased towards stifling open markets. One of the big questions in

²⁵ Co-authored with Vlad Tarko.

development economics is therefore how countries ever liberalize (Frye and Shleifer, 1997; Blanchard and Shleifer, 2001; Acemoglu and Robinson 2012, ch. 3 and 11).

Explanations of economic liberalization of rent-seeking regimes often take one of four forms: (1) Elites are taken by surprise by developments generated by creative destruction, and the political balance of power is altered in the direction of a more inclusive system (North and Weignast, 1989; Acemoglu, Robinson and Johnson 2005). (2) Due to the phenomenon of “private truths, public lies” (Kuran, 1995), elites are taken by surprise by social movements that ferment under their radar and unexpectedly turn into revolutions (Kuran, 1989; Tilly, 1993; 2003; McAdam, Tarrow and Tilly, 2001; Tilly and Wood, 2009).²⁶ The revolutions must then demolish old power structures for the reforms to be sustainable (Murrell, 1993: 129; Boettke, 1993; 2001, ch. 9-13; Åslund, 1999). (3) Elites are bought off. They are essentially paid a large present benefit in exchange for giving up their long-term privileges (Wintrobe, 1990). Examples are the abolition of slavery in Britain and various peaceful transitions that involve some form of “reconciliation” (Boettke and Coyne, 2007). (4) Quasi-benevolent and resourceful dictators enter the stage. Examples include South Korea in the 1960s (Haggard et al., 1990: 26), Taiwan, and China, where “growth was not blocked by authoritarian rule, and may perhaps have been accelerated by it, as the governments invested heavily in education, infrastructure, and technological upgrading” (Sachs, 2012).

²⁶ This can create “constitutional moments” (Buchanan 1997: 186; Voigt, 1997: 26; 2004: 223), and opportunities for irreversible “shock therapy” reforms (Lipton and Sachs, 1990: 100; Åslund, 2001: 46).

We explore an important fifth path to liberalization that relies on the use of special economic zones (SEZs). We develop a model of internal elite dynamics that recognizes a government as a heterogeneous group of individuals, rather than a monolithic agent (Wagner, 2007: 7; Eusepi and Wagner, 2011). The model allows us to explain how SEZs can increase political elites' relative payoffs from liberalization versus the status quo. The SEZ path to liberalization is unlikely to lead to policy reversals. It is also cheaper than buying off an entire authoritarian government at once, as it involves the compensation of only a subset of the existing elites.

We apply our model to a comparative analysis of China and Ghana. China is an often-cited example of how SEZs have contributed to a transition from protectionism to openness towards foreign investment and trade (Ge, 1999: 1283). The number of SEZs in other African countries has grown rapidly in the last couple of decades as part of the development programs of many African governments (Farole, 2011b). If SEZs reformed China, why would they not work the same miracle in Africa?

Ghana provides a good case study because its SEZ program looked promising by the standard benchmarks. According to a World Bank report, Ghana's zone program was "one of the best designed, most flexible, and most innovative" in Africa (Farole, 2010a: 23). A commonly cited problem with zones, in the Indian case for instance, is that they are governed by unstable rules (Keshawar, 2008: 11-12). Ghana's SEZs by contrast, had stable of rules and codes and thus a seemingly secure and reliable business climate (Farole, 2010a: 12). Ghana also relied on the private sector for zone development, which is regarded as "best practice" for SEZs (Farole, 2010a: 15). Like China, Ghana

introduced large, diversified zones that engaged in a wide range of businesses, including services (Farole, 2010a: 3; Ge, 1999: 1269; Fenwick, 1984: 380). The incentives for businesses were in fact more attractive, clearer, and more transparent in Ghana than in China (Farole, 2010a: 12). Therefore, by the standard benchmarks, it seems as though Ghana would have been at least as successful as China in using SEZs to promote reforms. Instead, China succeeded while Ghana failed.

The problem with standard benchmarks for comparing SEZ regimes is the disregard of the role institutions and political processes, which are evidently important for economic development (Nee, 2000; Chen, Hillman and Gu, 2002; Tian, 2001; Brandt et al., 2004; Bruner and Oxoby, 2012). Our model helps us analyze which institutional and political conditions are needed for SEZs to contribute to a country's overall development. It implies that a country needs to be fiscally and politically decentralized and that the ruling political elites must have conflicting interests for SEZs to be beneficial. As a decentralized system with disagreements within the ruling elite, China fits the mode fairly well. By these benchmarks, however, the SEZs in Ghana were unlikely to spur economic reforms.

The next section defines the SEZ concept and explains why it is a special innovation in federalist practice. Section 3 defines what we mean by "successful" SEZs. Section 4 develops a model to SEZs creation and analyzes the potential for reform reversals. Section 5 applies the theory to the comparative cases of China and Ghana.

3.1 SEZs as an innovation in federalist practice

SEZs come in many different forms and take on different labels depending on such things as areal size, target market and types of production. We will use SEZ as a generic term, but is often the label used for larger zones with both production facilities and residential properties that are not restricted to producing for exports. Export processing zones, by contrast, are smaller industrial parks that only contain production facilities. Governments generally exclude SEZs from certain trade barriers, taxes, and sometimes also to labor and environmental regulations. As such, they enjoy exceptions to federal laws that other parts of the country must obey.

In the standard model of federalism, institutional diversity at lower administrative levels is embedded in the larger federal legal framework. Laws at the local level cannot breach those at higher levels (Riker, 1964b; V. Ostrom, 1991; Weingast, 1995; Ter-Minassian, 1997; Bednar et al., 2001; V. Ostrom and Allen, 2008). The federal level can prevent protectionist policies by local jurisdictions, which Weingast (1995) argues is a key to a resilient market order. Thus, as E. Ostrom (2005, ch. 9) notes, federal level rules that assure minimal universal standards prevent “local tyrannies”, while still allowing for local experimentation.

SEZs take federalism a step further by avoiding even the federal level rules. For SEZs, the central government explicitly allows federal level rules to be breached. Because SEZs cannot be created locally without the central government’s permission, they are not mere expressions of a country’s political decentralization. In countries that have more than two administrative levels, SEZs can be granted exceptions either to

central level rules or to some of the lower level rules. In China, for instance, there are five hierarchical levels of government: Central, provincial, prefecture, county, and township. Chinese SEZs have been introduced both by the central government and by the lower provincial or prefecture levels, thus carving out exceptions to the rules of the different levels of government (Wang, 2013).

It seems not too radical to describe an SEZ as an enclave acting as a foreign territory (Chaudhuri and Yabuuchi, 2010). Because the decision to create an SEZ is politically easier than changing the rules for the country as a whole, SEZs facilitate the introduction of greater decentralization in particular areas. This allows for institutional diversity that promotes faster changes than the standard federal degree of decentralization.

3.2 Explaining SEZ success

Exemptions from taxes, tariffs, and regulations allow SEZs to attract FDI, create employment opportunities, and increase demand for domestic products (FIAS, 2008: 12-14). This has earned them praise as tools for economic development (FIAS, 2008: 32; Haywood, 2004). Many SEZs have however failed to live up to expectations. The Indian zone program started in 1965, but until a set of policy revisions in 2005, it did not generate much investment or employment (Gopalakrishnan, 2011: 139). While the SEZ program in Poland has expanded, the government has increasingly used it to provide benefits to particular businesses (Gwosdz et al., 2007: 831). Some governments have provided SEZs with infrastructure that turned into “white elephants”, structures that cost more to maintain than the benefits they yield (Farole and Akinci, 2011: 4).

More than half of Sub-Saharan countries have introduced SEZ schemes, but most of them have shown disappointing performance. The investment attracted to African SEZs has often been unsustainable and vulnerable to political developments (Farole, 2011b: 67-69). Nigeria's zones sparked a conflict with the customs authorities, which refused to give up their revenues by implementing lower tariffs (Farole, 2010b: 20). The zone program in Senegal in 1991 served primarily as a safety valve for protected domestic businesses (Baissac, 2011b: 12). SEZs clearly do not only face economic obstacles, but political ones as well.

To analyze the necessary institutions for SEZ driven reform, we must first specify what we mean by SEZs being "successful". We cannot measure success this solely on the basis of the amount of investments or structures in a zone. While investments and exports in an SEZ may grow, that does not mean that the zone is good for the economy. It may be merely be shifting investments around, causing resource misallocations as a result. Also, buildings in SEZs may just be white elephants or the result of rent-seeking rather than market-driven profit seeking. A successful SEZ scheme, by contrast, must promote economic growth in the country as a whole.

Under what conditions, then, is this possible? A system of growth-harming policies, such as repressive taxes, trade protectionism, wage controls, and government expropriations, encourages rent-seeking by businesses seeking exemptions. Rent-seeking is wasteful and makes the economy underperform as a whole. If SEZs, which rely on attracting investors, can abolish the destructive policies, they may successfully promote liberalization. If, by contrast, rules are business friendly and non-discriminatory, with low

taxes and prudent regulations, the country will already enjoy a minimum amount of rent-seeking (Buchanan, 1980b; Buchanan and Congleton, 1998; Boettke, 2009). As a policy of differential taxation and regulations, SEZs will likely create rents, rather than to lower them, and thus do more harm than good.

Whether SEZs promote liberalization or cause more rent-seeking depends on the incentives of policymakers. In a liberalized and non-discriminatory system, the only possible reason to introduce SEZs is to extract rents. In a system filled with distortions and rent-seeking, we must ask why the government wants SEZs. If all powerful decision makers in the government have an interest in extracting maximum rents, they will only introduce SEZs to use them as rent-seeking tools. They may even use SEZs to avoid policy changes nationwide, and thus effectively stifle liberalizing reforms (WB, 1992: 3). If a majority of the elites actually want liberalization, they can liberalize the economy more effectively by introducing more general reforms, rather than the selective SEZs. There is however a third, more interesting scenario. Because people in government may not have the same interest, there may be reform-minded people who, while powerful, are too few to change the system as a whole. If this elite minority can use SEZs to gradually change the system, the zones are indeed useful as tools for liberalization. This is the case that we will explore.

3.3 Pro-growth SEZs and liberalization avalanches

This heterogeneity of elites, coupled with the need to agree about an SEZ at the central level, are critical factors for understanding the process by which SEZs may be created to promote economic development. A system of rent-seeking persists because it is

profitable for a majority of the political elite.²⁷ Even though liberalizing and growth promoting policies would increase their tax revenues, they would lower their rents even more. For a minority of officials, however, the higher tax revenues that they gain from liberalization are higher than the rents that they lose.

The reformers build a coalition in favor of SEZs. Although they prefer countrywide reform, they can initially only aim for this more modest step towards liberalization. The more radical is a reform, the more difficult it is politically to implement. Liberalizing reforms that are politically feasible are therefore often “second-best solutions”, which is a label also bestowed upon SEZs (WB, 1992: 3; Rodrik, 2008: 7).²⁸ SEZs thus have two positive features for an official pursuing increased local liberalization: (1) they look less threatening to political elites who benefit from the status quo, and (2) their policies can be more radical than compromises about changes in the prevailing rules.

²⁷ Corruption among the lower political ranks can be every bit as destructive, as it makes the entire system even more unpredictable (Easterly, 2002: 247; Frye and Schleifer, 1997; Kahana and Liu, 2010). However, the solution for low-level corruption is less of a conundrum. A government that wants to stop its bureaucrats from asking for bribes can adopt the Singapore strategy, with higher punishment, monitoring and other disincentives (Quah, 1995; Becker, 1974). For the purpose of this paper, we ignore the principle-agent problems between high-level political elites and lower members of the administration. In line with Schleifer and Vishny (1993), we model a government’s vested interest in rent-seeking as a function of the benefits a government can derive from it, rather than the outcome of a principal-agent game between government officials and bureaucrats (Becker and Stigler, 1974; Banfield, 1975; Rose-Ackerman, 1975; Klitgaard, 1988).

²⁸ As Acemoglu and Robinson (2013) note, “a set of policies which may seem deeply misguided by the standards of basic textbook economics may nonetheless be serving the political economy purpose of holding together a governing coalition”.

We use a public choice model to explain the political economy behind the creation of pro-development SEZs. We first look at how SEZs can generate avalanches of liberalization, and we then discuss the risks of policy reversal.

3.3.1 How SEZs yield liberalization avalanches

As we will show, fiscal decentralization and heterogeneous elites are crucial components in SEZ success. However, while fiscal decentralization is a recognized promoter of growth inducing change, the importance of elite heterogeneity is less appreciated.

In Blanchard and Shleifer's (2001) model of federalism, a local government chooses to promote growth if

$$p a y > b \tag{1}$$

where p is the ratio of the probability that the local government stays in power if it promotes growth, to the probability that it stays in power if it prevents growth. The parameter a is the share of local revenues that the central government allows the local level to keep, and y is economic output from growth-promoting policies. Finally, b is the benefit to the local government from pursuing growth-suppressing policies, as it benefits from the rent-seeking that these policies generate. A central government can raise the magnitude of p by both rewarding local officials for good economic performance, and by deposing them if they perform badly. The higher is p , the higher is thus the level of political centralization. In the words of Blanchard and Shleifer (2001), "[t]he local government is more likely to choose growth, the stronger the stick (the higher p), the

bigger the carrot (the higher a), the larger the growth potential (the higher y), and the smaller the benefits of capture or the lower the costs of reining in competition for rents (the lower b)”.

This model leads them to conclude that “for federalism to function and endure, it must come with political centralization”. To come to this conclusion however, Blanchard and Shleifer assume that the central government is united in the pursuit of maximizing economic growth. In their model, local governments may be captured by growth-oppressing interests, but the central government is not (p. 6). The analysis thus ignores the fact that the reason reform did not come about in the first place may be that central government officials benefit from a rent-seeking system. Without accounting for rent-seeking by the central government, Blanchard and Shleifer do not provide an explanation for how reform can come about in such case.

Much of Western European economic history does indeed tell of the adverse motives of ruling elites (Ekelund and Tollison, 1981; Nye, 2007; Braithwaite, 2008, ch. 1). Within European mercantilist societies, liberal reforms occurred only if “the major elites benefited from commercialization and could successfully cut off those who would oppose the spread of national commerce” (Nye, 2009: 59). The change emphasized in this literature is the switch from rent-seeking to taxation. When developments occur that reduce the costs of setting up an effective system of taxation, the government has an incentive to open the economy and obtain more revenues from taxation and less from rent-seeking.

By introducing elite heterogeneity, we can analyze the internal dynamics of a rent-seeking government. As we will show, in addition to decentralization, heterogeneous elites are a crucial part of gradual SEZ driven reform. Following Blanchard and Shleifer (2001), we denote revenues from taxation as $p a y$ and revenues from rent-seeking as b . We assume that the same trade-off for local leaders between rent-seeking and taxation is at work, and that local leaders can use the discretion over local policies that the federal system allows them to determine the balance between taxation and rent-seeking.

A local leader who benefits from liberalization decides to rely on taxation as much as possible, and will also want to host an SEZ to increase tax revenues further. SEZs liberalize the economy more than the federal system allows, through its exemptions from federal taxes, tariffs, and regulations such as labor laws.

If an elite member is granted an SEZ, this person is further incentivized to pursue pro-growth policies and discourage corruption at the local level. To illustrate this, we let λ denote the level of local liberalization that SEZs generate, where $0 < \lambda < 1$. Local officials may have a Cobb-Douglass utility of the revenues from taxes and rent-seeking respectively:

$$u(p a y, b) = \lambda \text{Log}(p a y) + (1 - \lambda) \text{Log}(b) \quad (2)$$

A local leader can only obtain an SEZ if there is enough support for the policy at the central level. We assume that the central government deciding about SEZs consists of elites with interests aligned with the country's local leaders. They can either formally represent local leaders, or receive informal kick-backs from them. The heterogeneity of

central decision makers thus stems from the divergent interests of the local leaders that they represent.

The divergent interests of the local elites results from the fact that some local leaders see higher profits from liberalization than others. Their areas may have higher growth potential because they are more attractive to investors. An area on the coast, for instance, benefits from tariff exemptions because they easily attract exporting companies. In other areas, local practices and institutions may prevent effective tax collection, thus raising the cost of extracting taxes. Local elites also have different personal capacities of governing in a business friendly way versus extracting rents.

A member of the elite that wants to introduce SEZs must persuade a majority of the other members to be in favor of the policy for their region. These can be bribed, threatened, or cajoled. Because the SEZ aspirant must incur these costs, this will likely be the local leader with the most to gain from introducing an SEZ, persuading those with the least to lose from liberalization. Reform opponents must at least perceive that they will lose less individually than the elite advocating an SEZ can offer them as compensation. The immediate loss of the anti-reform elite primarily stems from the risk of SEZs attracting companies from their region. This makes local monopolies less profitable, hence lowering their b .

We denote elite heterogeneity as the members of the elite having different costs of extracting taxes and revenues. Those with relatively low costs of tax collection as opposed to rent-seeking will thus be the ones asking for SEZ approval. The local elites' expenditures on taxing and rent-seeking respectively are limited by their budget

constraints, $B = P_{tax}p a y + P_{rents}b$, where P_{tax} and P_{rents} represent the administrative costs of taxation or rent-seeking respectively.

Maximizing u with respect to $(p a y)$ and (b) , subject to the budget constraint, gives the demand functions for rent-seeking and taxation for each region:

$$\begin{cases} p a y = \lambda \frac{B}{P_{tax}} \\ b = (1 - \lambda) \frac{B}{P_{rents}} \end{cases} \quad (3)$$

When liberalization in a region is low (small λ), the demand for rent-seeking rises above the demand for taxation. With the administrative budget unchanged, revenues from rent-seeking thus become larger than that from taxation when liberalization decreases. More liberalization (large λ), by contrast, raises the potential revenues from taxation while lowering the revenues from rent-seeking. In figures 4 and 5, demand for taxation is illustrated by the thin line and demand for taxation with the thick line.

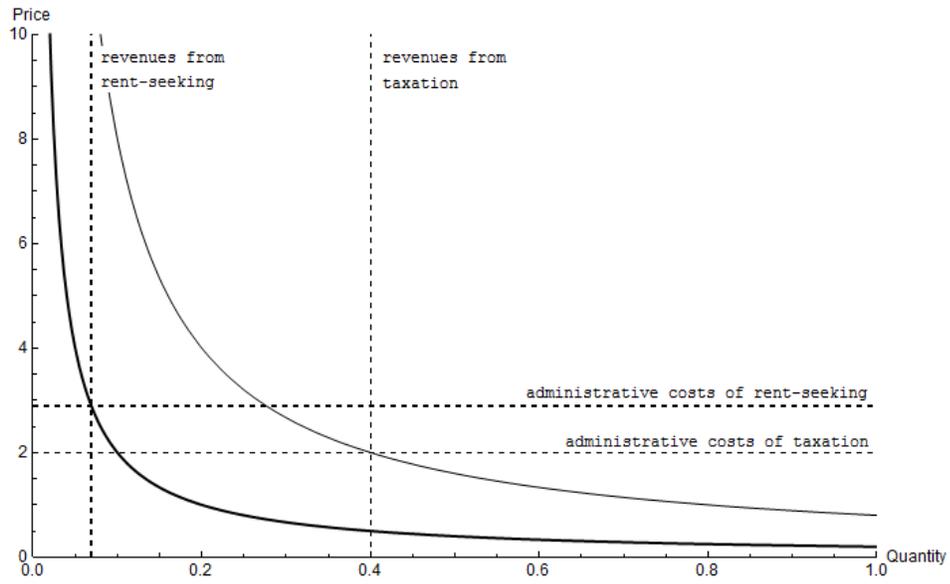


Figure 4: More liberalization: Demand for taxation is higher than that for rent-seeking

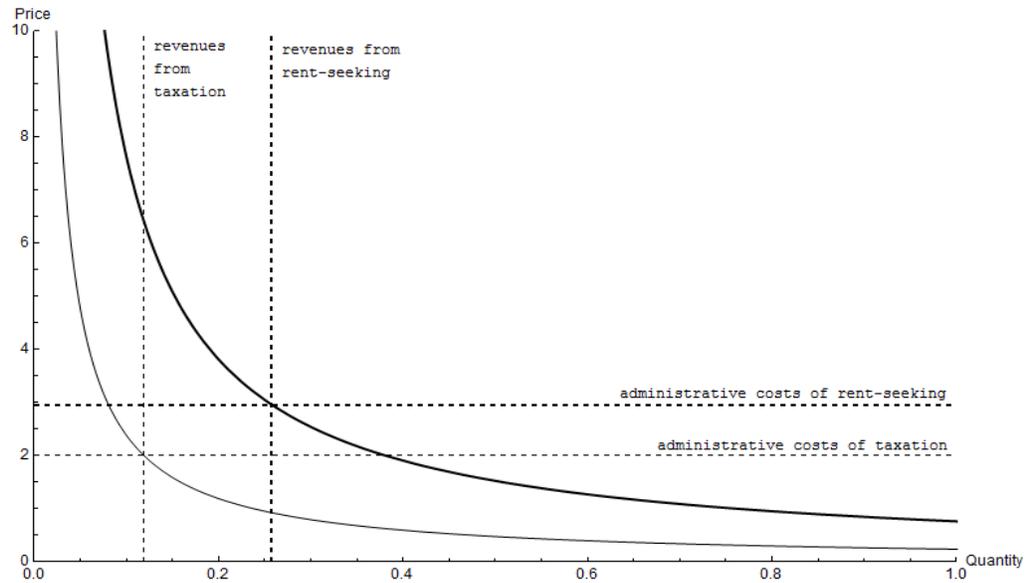


Figure 5: Less liberalization: The demand for rent-seeking is higher than that for taxation

The introduction of an SEZ is not an isolated event, as liberalization in one area generates political externalities for other regions. Simmons and Elkins (2004) describe how policy diffusion can stem from a reputation effect. As other countries introduce a policy, the reputation of other countries from engaging in it changes. SEZs can similarly change the reputation of other regions in a country as being more liberalized. Businesses may then start acting as if the country is less corrupt. SEZs may also lower the effective protectionism in other regions if importers start avoiding tariffs by buying or smuggling inputs via the SEZs.

In these ways, SEZs generate liberalizing externalities that on the margin make taxation relatively more attractive than rent-seeking to elites in other parts of the country.²⁹ Areas without SEZs will thus also see a slight rise in λ , the level of liberalization from SEZs. A pro-growth SEZ in region k thereby creates a liberalizing externality on the other regions: $\Delta\lambda_i = L_{ik}\Delta\lambda_k$, where $0 < L_{ik} < 1$ and represents the size of the region-to-region liberalizing externality.³⁰

The change in external liberalization affects the trade-off that local leaders make between taxation and rent-seeking policies. To see this, we introduce the demand functions (3) back into the utility functions (2). We then get each elite member's satisfaction with the existing level of liberalization in their region (Figures 6 and 7):

²⁹ Because SEZ leads to more investment in other areas of the country, they may not grow at the expense of other regions. Indeed, it seems that the Chinese SEZs did not have such negative effects on other regions (Wang, 2013).

³⁰ One can imagine that the liberalization externality could also be negative, but Simmons and Elkins (2004) show empirically that this is unlikely.

$$u(\lambda) = \lambda \text{Log} \left(\lambda \frac{B}{P_{tax}} \right) + (1 - \lambda) \text{Log} \left((1 - \lambda) \frac{B}{P_{rents}} \right) \quad (4)$$

No member of the elite is ever satisfied with the existing degree of liberalization, but political externalities between regions make it impossible for any local elite to change λ unilaterally. What they can do is to advocate for or against SEZs in their own or other regions. The externality generated by liberalization elsewhere either increases or decreases their utility, $u(\lambda)$. Whether they are for or against more liberalization thus depends on what the current level of liberalization is in the country.

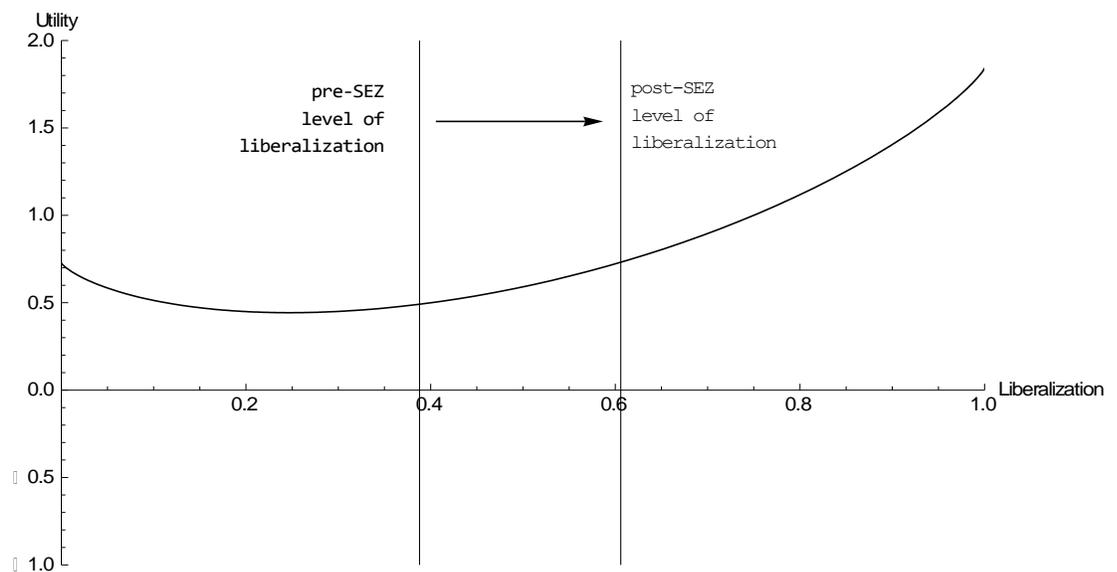


Figure 6: Incentive compatibility. An SEZ makes reformers want further liberalization

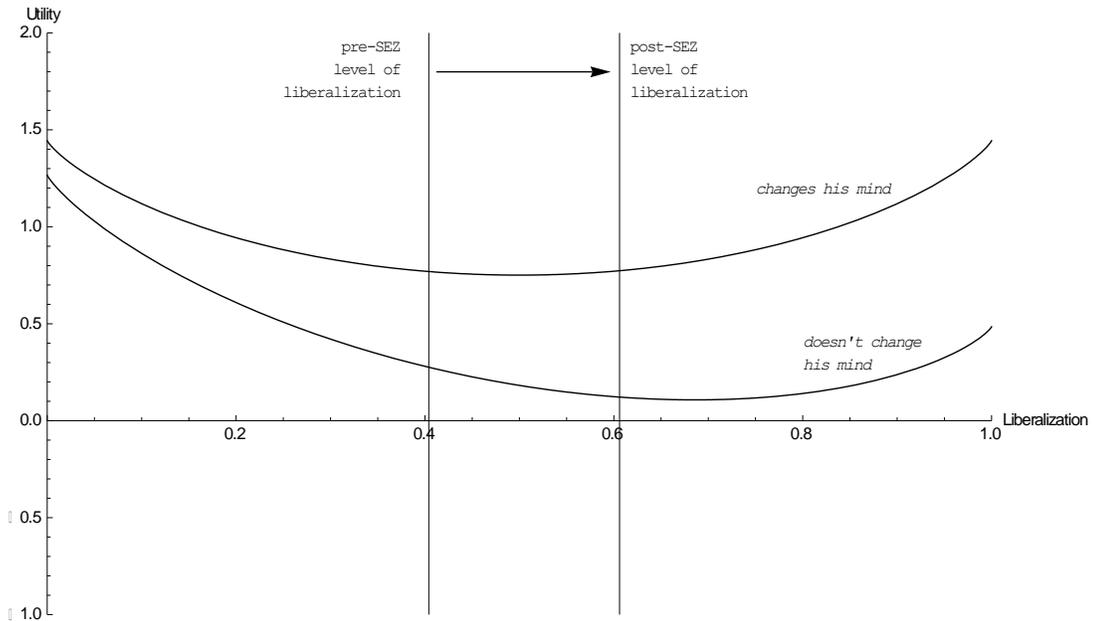


Figure 7: Appeasement of opponents: An SEZ makes some opponents change their mind

We can now analyze whether an SEZ leads to a liberalization avalanche or to a policy reversal. The introduction of an SEZ raises the level of λ for all local elites. Because their $u(\lambda)$ has only one minimum, a local leader in favor of liberalization (with the pre-SEZ level of λ already to the right of the minimum) then becomes an even stronger advocate for liberalization and hence more SEZs (Figure 6). Some of the elites switch from being against to being in favor of liberalization, as the creation of the SEZ pushes the level of liberalization to the right of the minimum of their utility function (Figure 7). After the creation of the SEZ, further liberalization then increases the agent's utility, while smaller reversal in the direction of less liberalization decreases it: $u(\lambda + \Delta\lambda) > u(\lambda - \Delta\lambda)$.

The creation of one SEZ can thus lead to the creation of further SEZs. One zone gives more members of the elite the incentive to support further SEZ initiatives. New local leaders will also want to pursue an SEZ for their region. The fewer the members of the elite against SEZs, the cheaper it will be to obtain government majority approval. With an increasing share of local leaders in favor of SEZ, the SEZ opposition loses steam. Eventually, a majority of the elite prefers liberalization, and can pursue broad liberalizing reforms. More local leaders will then have the incentive to dismantle their rent-seeking systems in favor of economic growth and taxation.

This model shows the importance of elite heterogeneity and decentralization for SEZs induced reforms. If a rent-seeking government is in agreement about preserving the protectionist regime, no elite minority will attempt to liberalize with the help of SEZs. If the country is fiscally centralized, local leaders do not obtain the proceeds from a growing economy and therefore do not have the incentive to initiate SEZs. With political centralization, they cannot pursue the necessary local reforms that allow them to obtain higher tax revenues. With centralization, therefore, SEZs can only come about by the imposition on local elites by the central government. This may happen if a majority of the government is in favor of more liberalization. However, as we have argued, SEZs are not important or even beneficial for a government in a collective pursuit of economic growth. A government against liberalization, on the other hand, would only impose SEZs on a region to create more opportunities for rent-seeking by providing particular company privileges. Therefore, SEZs cannot be useful under fiscal centralization. If they do

appear, they either signal that the government is misguided in its choice of development policies, or that there are severe corruption and rent-seeking problems at the top.

3.3.2 Reform robustness or policy reversals

Any development policy can only work if the government can credibly commit to it (North, 2005, ch. 8; Boettke, 2009). This will not be the case with SEZs if the government may reverse them. If the government that created the SEZs is not believed to keep the rules in place, investors will likely stay away from them.³¹

A government's commitment can only be credible if it is incentive compatible. As we have shown, SEZs generate their own incentive compatibility, by making elite members benefit from liberalization. They are not introduced because the administration in office saw value in human flourishing among its people, so that less benign future administrations will want to reverse the policy. SEZs are not a way to lure companies to make investments that the government can subsequently expropriate. Rather, their introduction and persistence are driven by the self-interest of elite members in pursuit of maximizing their personal revenues.

Even when the promise of fiscal decentralization is broken in a federal system, SEZs seem less likely to be affected. Because they enjoy substantial independence

³¹The issue of credible commitments has proven to be of great importance also in other contexts (Williamson, 1983; Weingast, 1995; Boettke, 2009). For example, in the post-communist transition apparently successful reforms were reversed or engendered a backlash as the political elites lacked the incentive to keep the reforms in place (Murrell, 1993; Boettke, 1993; 2001: ch. 10-13; 2009; Åslund, 1999).

compared to local jurisdictions under standard federalism, they enhance the credibility of a revenue-sharing arrangement between levels of government. This SEZ independence has manifested itself in China. Weingast, Montinola and Qian (1995) describe China as a system where the central government commits to preserving federalism. However, Chen, Hillman, and Gu (2000) show that this commitment was not all that credible. When the central government's revenues previously decreased, this weakened the revenue-sharing arrangements with the local levels. Local governments were then incentivized to switch to a model of governance that undermined economic growth. Yet, despite the decline in fiscal decentralization at this time, the creation of SEZs continued unabated (Wang, 2013). The SEZs may thus have served as decentralization's more robust substitute.

3.4 Case studies

The case studies of China and Ghana illustrate our argument. In China, SEZs were introduced in a context of political disagreements and fiscal and political decentralization. In, Ghana they were created under political agreement and fiscal centralization. This has led the SEZs in China to work in favor of the reform process, while they failed to do so in Ghana.

While Ghana differs from China in many ways, in population and location particularly, its experience with SEZs is similar enough to make a useful comparison. Among African countries with zones, Ghana is seemingly the best candidate to have replicated China's successful use of SEZs as a part of its economic reforms. In 1995, Ghana adopted a promising SEZ program as part of an industrialization strategy inspired by the successful East Asian countries. It was not a relatively backward country at the

time. Both its inflation adjusted GDP per capita and its score in the World Bank's human development index were higher than it was in China when it introduced SEZs back in 1980. Until 1982, the people of Ghana were actually richer than the Chinese. In 1995 by contrast, the people of China were almost three times richer (Figure 8).

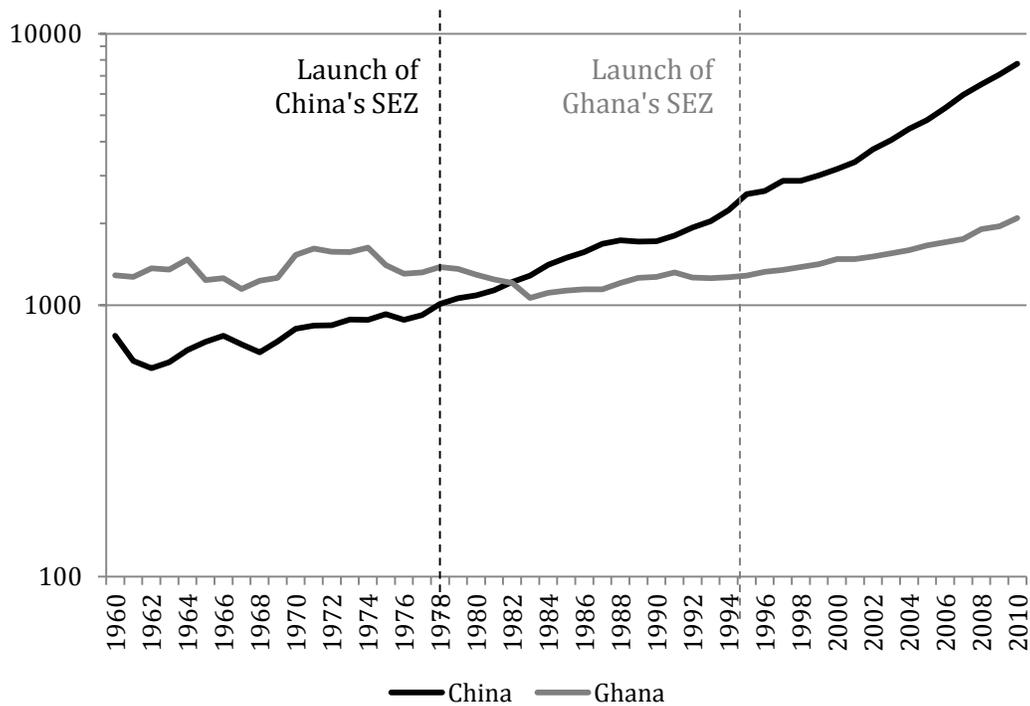


Figure 8: PPP adjusted GDP per capita in 2005 USD of China and Ghana

Macroeconomic data give little guidance as to whether the SEZs played a role in the countries' progress. Many factors play into a country's development (Sala-i-Martin, 1997). To understand whether SEZs are used for economic reform or as tools for rent-extraction, we look at the political process by which they came about. We discuss this

development in light of the key factors that drive our model: decentralization and heterogeneity among decision makers.

3.4.1 China

The Chinese reform period began in the late 1970s, and SEZs are acknowledged as playing a prominent part in the subsequent Chinese “growth miracle” (Ge, 1999: 1283). China had by then developed a decentralized system, both fiscally and politically. Xu (2011) describe the Chinese system as a “regionally decentralized authoritarian regime”. While not a federal system, since the central authority appoints local officials, it is one of both political and fiscal decentralization (Id.; Li and Zhou, 2005).

Political decentralization is evident as local officials decide most local policies. Even during the time of central planning in China, the country was organized by region, rather than the central government, which for the state-owned enterprises still holds true today (Maskin, Qian, and Xu, 2000; Qian, Roland, and Xu 2006). In modern China, local leaders have significant autonomy over local policies, allowing them to experiment with different policies. They thus have the discretion to change their policies towards more taxation or rent-seeking (Li, Li and Zhang, 2000: 283; Xu, 2011: 1079).

Fiscal decentralization resulted from tax reforms in the early 1980s. By the mid-1980s, Chinese provinces could keep a large part of their internal tax revenues, thus having the incentive to profit from taxation. While different provinces had somewhat different sharing schemes, the share of tax revenues that was sent to the central government was clear and predictable (Oi, 1992; Ter-Minassian, 1997, ch. 26). An

official deciding whether to rely on revenue from extracting rents or from taxation from a growing economy could therefore make the relevant cost-benefit calculation.

Local demand for SEZs manifests the importance of fiscal decentralization for SEZ creation (Crane, 1990: 163). While the Chinese SEZs had to be granted by the central government, the initiative came from local elites, who began to lobby for SEZs when they saw the profit opportunities that they offered. The first initiative came from representatives of China Merchants' Steam Navigation Company, based in Shekou in Guangdong province, who had property and other commercial interests in nearby Hong Kong. They persuaded the Minister of Communications, Ye Fei, to grant them a special deregulated area for conducting business with the then British territory. The government subsequently declared the Shekou Industrial Zone in 1979. Minister Fei thus became one of the early proponents of zones within the ruling elite (Sit, 1985: 75; Crane, 1990: 26, 156).

Another early SEZ promoter was the party secretary for Guangdong, Wu Nanshen. He managed to get the government to grant the creation of the first SEZ in his province in 1979. The central government then allowed for three SEZs in Guangdong, and another one in the province of Fujian (Coase and Wang, 2012: 60-2; Crane, 1990: 27). Following the creation of the Fujian SEZ, conflicts between the local and national leadership over SEZs became tense, with the latter opposing further expansion. This caused a halt to any new regulations in the zones for four years (Crane, 1990: 20, 28, 34). In 1984, China's fifth SEZ was introduced in Hainan, along with 14 so called "coastal cities" (p. 95).

The disputes surrounding the SEZs reveal the heterogeneity and divergent interests of the Chinese elite. There was no government consensus on the policy. Even Deng Xiaoping, the then Vice Premier of China, who is the person most commonly associated with the policy, was not initially a supporter. The SEZs had only a handful of advocates back in 1979-1980, and Deng only came on board with the idea around 1983-1984, when several other central leaders started supporting it (Crane, 1990: 156).

As the first SEZs did not enjoy much political independence from provincial and state authorities, they reflected careful compromises with the protectionist elite. More political decentralization came in 1981-1982, when the authority over the SEZs was divided between local, regional and state levels (p. 55). In 1984, further reforms gave SEZ factory managers substantial responsibilities (Crane, 1990: 82-5). Growing SEZ support also made the central government remove several regulations and bureaucratic obstacles for SEZ businesses (pp. 76-9). After a slow start, industrial investments in the SEZs then started to increase substantially (p. 101).

More members of the Chinese elite started supporting the SEZs as they grew in quantity and size. As a result, they were not reversed despite facing some serious challenges. In 1985, a corruption scandal in Hainan allowed SEZ opponents to point at the problems with SEZs. More government monitoring and central power over the SEZs followed (Crane, 1990: 111-16). Yet, these were mostly rhetorical changes. SEZ proponents had by then also grown powerful and plentiful enough to see to it that the policy was not reversed.

To appease the elites who feared the loss of their rent-seeking revenues, the reformers agreed that the SEZs would aim to attract more foreign investors and fewer national companies. This would lower the risk of domestic companies moving to the SEZs from other areas. They also agreed on a policy that explicitly combined SEZs with import substitution. Protectionist local elites would thus have less incentive to resist SEZs. As a result, the SEZ expansion could continue despite the opposition (Crane, 1990: 117-22). The SEZs were thus introduced gradually, and only when they were not perceived as too threatening by the protectionist elite. More straightforward liberalization of regional or central rules would have been opposed more vigorously, as they would have overtly challenged the existing power structure.

With more SEZs, more regional leaders benefited from the tax revenues that decentralization granted them, which gave the SEZs growing support. Regional governments that saw that they benefited from hosting growing communities of enterprises and productive people did not want to see the reforms reversed (Weingast, Montinola and Qian, 1995: 69). Conservative officials who felt threatened by the SEZ reforms therefore found themselves in a shrinking minority.

The weakening SEZ opposition set the stage for the liberalization avalanche in China. The number of SEZs has grown dramatically since the 1980s. The share of municipalities hosting SEZs was 9% in 1985. In 1992, all provincial capitals were given SEZ status and by 1995, almost 70% of Chinese municipalities hosted SEZs. By then, the liberalization avalanche had clearly played out. In 2008, this share had risen further to 95% (Wang, 2013: 136; Alexander, 2014).

Concurrently, China has liberalized nationally. Between 1980 and 1985, China's score in the Fraser Institute's Index of Economic Freedom improved from 4.0 to 5.1, followed by further improvements to 6.3 in 2005. Corruption may still be a problem in China, but it is no more prevalent than in other countries at the same level of development (Ramirez, 2012). While theories abound about how the Chinese liberalization came about, the SEZs do seem to have played a significant role in changing incentives in favor of reform.

3.4.2 Ghana

Ghana saw decades of economic mismanagement after its independence in 1957. Subsequent socialist and nationalist governments introduced state monopolies and cumbersome regulations of foreign investments, and made the main export sectors dependent on state subsidies (Frimpong-Ansah, 1991; Grant, 2001: 999). Before the mid-1980s, Ghana experienced decades of declining GDP per capita and attracted significantly less FDI than other African countries of comparable wealth (Dzorgbo, 2001).

Important liberalizing reforms came about in 1983, including trade liberalization and the end of exchange restrictions, price fixing, and public monopolies (Frimpong-Ansah, 1991: 148). In 1989, the then head of state, Jerry Rawlings, privatized hundreds of state owned firms (Ansah, 2006: 218). Ghana improved its score in the Index of Economic Freedom from 3.4 to 5.4 between 1985 and 1995. The reforms turned the country's growth trajectory from a contraction of 1% on average 1975-1984, to an average growth of 5.2% between 1985 and 1989 (Mensah, et al. 2006: 115). Today,

Ghana is seen as one of the most promising future growth markets in Sub-Saharan Africa (Hawkins, 2013; Economist, 2011).

These reforms came more than a decade before the country's SEZ program started in 1995. Rawling's government introduced SEZs as part of a program to turn Ghana's economic interests eastward. There was popular resistance against western dominance in foreign investment, as well as a growing pessimism about the result of the country's "Western" reforms. The government wanted to adopt the state-led development models of China and Malaysia, and to seek new trading partners in their region. The government could use the privatization of its state-owned assets to offer lucrative contracts to Asian companies and thus attract them to Ghana (Ansah, 2006: 7, 15).

Ghana's government fostered particularly close ties with Malaysia. Ethnic Malaysians, the Bumiputeras, had received favors and subsidies from the Malaysian government for decades (Johnson and Mitton, 2003: 355). The Malaysian government then started directing them to venture abroad to gain global market positions (Ansah, 2006: 268-9). Ghana was suitable as a trading post, and the lucrative investment deals by the Ghanaian government allowed the Malaysians to dominate several key sectors throughout Ghana, notably the telecom industry (p. 297).

The centerpiece of the government's policies to attract FDI to Ghana was the SEZ in the port of Tema, about 16 miles east of Accra (Farole, 2010a: 3). East Asian investors in particular, were expected to increase Ghana's exports by investing in the zone (Killick, 2008: 27; Ansah, 2006: 261). The government granted the right to develop the Tema zone to Business Focus, a company owned by Datuk Shah Omar Shah, a Malaysian

businessman with close links to the Malaysian prime minister and his party (Farole, 2011b: 193). Business Focus also controlled the development of Ghana's Port Authority (Ansah, 2006: 274).

Ghana's first SEZ thus came about as part of the government's strategy of industrial policy, trade, and international political relations. The SEZ was not, as in China, driven by the demand of local officials or entrepreneurs. More than economic, the government had political goals with Tema (Ansah, 2006: 9). With their newfound reciprocal benefits, the governments of Ghana and Malaysia formed a peculiar marriage, where the Ghanaian government used the SEZ to please Malaysian companies. The success of the zone became increasingly dependent on Malaysian investments, and thus vulnerable to Malaysian politics (Ansah, 2006: 285).

Relations between Ghana's government and Business Focus soon soured due to disagreements over infrastructure and service delivery. Business Focus halted its ongoing development of the SEZ, resulting in insufficient and half-made infrastructure that kept other potential investors in Tema away. The Asian financial crisis had the Malaysian government impose capital controls and other policies that discouraged the government-connected firms from investing abroad. Ghana's government found itself unable to make Business Focus resume its work (Ansah, 2006: 286; Farole, 2010a: 4).

In 1998, the World Bank attempted to rescue the project, promising \$50 million in support conditional on other investments from private companies. The private money never materialized, however, and the SEZ development remained stagnant (Xinhua News Agency, 1998; Mallet, 1999). The SEZ at Tema was more or less deserted until 2005,

when the World Bank started sponsoring the project. The SEZ has subsequently attracted investments. The government has provided the infrastructure, and there is an information, communication, and technology (ICT) park that is partly financed by the World Bank (Farole, 2010a: 4; Shan, 2011). Ghana also designated another three zones, which by 2010 had yet to see any development (Farole, 2010a: 7). The Ghanaian media have lately described the Malaysian deal in Tema as failed and corrupt.³²

The story of Ghana's SEZ regime lacks any resemblance of one where SEZs have the potential to drive economic reforms. The problem was not a misfortunate zone location. The Tema port has been important for Ghana's economy for decades. It is not that Ghana was a country somehow incapable of reform. Ghana has seen substantial liberalizing and growth-promoting reforms, but these came about more than a decade before the SEZ. For SEZs to be tools for liberalizing reforms there must be a local demand for liberalization. In Ghana's case, the demand for SEZs came from the top.

Due to the Ghana's fiscal centralization, local SEZ demand did not have the potential to materialize. The government oversaw substantial transfers between districts to reduce regional inequalities. Sub-national entities generated only 12% of their total revenues internally by 1999. By 2000, around 81% of district assembly revenues came from government transfers. Sub-national authorities were therefore more dependent on

³² "Government takes back Tema shipyard" (*Daily Graphic*, August 15, 2012); "Politicians take over Tema port" (*Vibe Ghana*, October 22, 2013); "Tema Shipyard saga rages on after divestiture" (K. Selorm, *MyJoyOnline*, August 1, 2010); "Tema Shipyard Deal: Malaysians Swindle Ghana" (*Modern Ghana*, 27 March 2013).

transfers from the central government than on their own local tax base (Inanga and Osei-Wusu, 2004: 85-94). Local officials did therefore hardly see any profit opportunity from liberalization in their region. Due to Ghana's fiscal centralization, the government's actions were not reflections of local initiatives.³³

Ghana also lacked a system of political decentralization, which would have given local leaders the discretion to adjust their policies towards more taxation versus rent-seeking. Its allegedly elected district assemblies had only limited power, and the central government appointed many of its members (Ribot, 2002: 6). Much SEZ planning stemmed from a central regulatory board that enjoyed discretion over SEZ policies (Farole, 2010a: 12, 14). Local politicians did thus neither have a stake in local development, nor the power to influence it. The central government wanted SEZs, but apparently not for the sake of economic liberalization. Policies at Tema were actually no freer than the rest of the country, not least due to a cumbersome registration process for SEZ firms (Farole, 2010a: 16, 18). This lack of liberalization may explain much of the zone's underwhelming performance.

The Ghana case does not only exemplify how an SEZ scheme introduced for other reasons than economic liberalization fails to benefit the economy. It also shows how standard benchmarks for SEZ success say little about their benefits. Ghana's zone scheme as a whole now hosts a lot of FDI, a benchmark often cited to determine SEZ

³³A 1974 law to give more budget responsibilities to local government was yet to be implemented in 2010 (Gilbert et al., 2013: 111).

success. As a result, it is described in a World Bank report as a relative success in the African context (Farole, 2011b: 70). However, by 2009, around 98% of that FDI originated in single factory zones, which are single companies that enjoy SEZ privileges. In 2010, they accounted for 36% of the country's exports, while Tema stood for only 8% (Farole, 2010a: 9, 11). Single factory zones are primarily reflections of companies' opportunities to obtain fiscal favors from the government. They are hardly harbingers of national reform.

3.5 Final Remarks

Special economic zones (SEZs) play an unusual role in economic development. As we have argued in this paper, SEZs constitute a government policy that can bring about liberalizing reforms even when a majority of the political elites is against them. It is often assumed that economic liberalization is dependent on a unified leadership that is committed to reform. Centralized power under a benevolent despot or a unified leadership is also seen as a condition for more reliable economic reforms. We have argued that such conditions are neither necessary nor favorable for a reform process. Not only can SEZs contribute to economic reform in the absence of such conditions. They are only useful when there is political disagreement over policy. While SEZs have been attributed by others for playing an important role in China's reforms, they have relied on the central government using them as a deliberate tool for economic growth (Litwack and Qian, 1998).

Decentralization is also a key factor in explaining why different countries see very different results from SEZ programs that on the surface look very similar. In centralized

systems, local elites in politics and business do not have an incentive to pursue economic liberalization by means of SEZs. Any zones are therefore either misguided or tools for rent-extraction by the government, rather than growth-promoting institutions.

The problem with SEZs is seldom that they fail to live up to the goals of its initiators. It is that under the wrong circumstances, these goals are not economic liberalization and growth, but political favors and rent-seeking. The centralization and absence of disagreement in Ghana's government meant that their SEZs served as vehicles for rent-extraction, and did not contribute to the country's liberalization.

The Chinese SEZs, by contrast, emerged in the right institutional and political context. The prospect of higher tax revenues led local officials to push for their creation. Because of the political dynamics within the fractionalized government, the Chinese SEZs could expand despite attempts by powerful government officials to prevent the spread of liberalization. It was thus not by happenstance that the Chinese SEZ expansion coincided with the country's economic liberalization.

Needless to say, many fortunate circumstances and policy changes in China contributing to the country's take-off. Likewise, the SEZ in Ghana was in no way determinant of the country's meager growth performance. The contribution of our analysis is to find the institutional and political factors that determine whether SEZs are a contributing factor to economic reforms. Whether SEZs promote development depends on the incentives faced by the policymakers who choose to use them.

4 CONCLUSION

As I have attempted to show, SEZs can be both an economic stimulus and a cause of resource misallocation. They can promote economic reform on the one hand, and allow governments to increase their rent-seeking on the other. They can boost investments and create jobs, but also stand in the way for reforms that would perform even better. Which role SEZs play will depend on whether the right institutions and policies are in place. The political economy tools that I have used allow us to say something about what these are. Privately developed SEZs are more likely to avoid many of the problems with zone that I have discussed. SEZs are more beneficial in decentralized systems than centralized ones, and where local leaders, by a democratic system or by other means, are incentivized to promote social welfare. SEZs can also be beneficial in the political context of disputes among heterogeneous elites, as well as when governments can preserve protectionist regimes while using SEZs to partially open up the economy.

Far from being the final word on this topic, I hope that my research will encourage more people to study this fascinating policy. There is still much to be understood about the political economy of special economic zones.

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