

Liberalizing Rent-Seeking: How Export Processing Zones Can Save or Sink an Economy

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Abstract

This paper presents export processing zones (EPZs) as a rent-seeking tool with the appearance of a development policy. My model of endogenous tariff formation illustrates how interest groups lobby for or against protectionism, which provides rents for the government. EPZs are a way to liberalize the economy while preserving some of these rents. They are therefore beneficial if their political alternative is more protectionism. The model indicates that EPZs do not benefit an economy via backward linkages but through marginal improvements to a country's trade regime. A case study of the EPZs in the Dominican Republic confirms the theoretical discussions.

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I. Introduction

Most economists see rent-seeking as wasteful (Buchanan 1980, p. 359; Tullock 2005, p. 9). Lobbying by businesses to influence government policy is an unproductive activity, but policy makers encourage it 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, p. 84, chap. 8). A contrasting view of rent-seeking is that it can actually offer economic benefits. It can, for instance, encourage the provision of public goods (Cowen, Glazer, and McMillan 1994) or increase the wealth of a country when its government engages in trade protectionism (Bhagwati 1980; Bhagwati and Srinivasan 1980). This paper extends the insight that rent-seeking can be beneficial by

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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, but governments still consistently set up barriers to trade. The political economy explanation is that policy makers extract rents from businesses by giving them protection from competition. Therefore, policy makers 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, p. 391; Frieden 2006, p. 351). In contrast, I will argue that governments may liberalize trade even if their sole objective is to maximize their rents from lobbying.

I study this dynamic by employing a model of endogenous tariff formation. While the literature on endogenous tariffs is well developed, it has not previously been applied to export processing zones. I show how a simple version of an endogenous tariff formation model can be applied to EPZs to help us understand their role in how rent-seeking can form trade policies. This article is also a development of the literature on the role of government incentives in zone policies (Moberg 2015, 2017; Farole and Moberg 2017).

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 often take the shape of industrial parks and host firms that export manufactured goods.¹ With EPZs, governments can introduce free trade for exporters in particular areas without necessarily affecting a country's protected domestic

¹ The zone concept is an ancient idea, and governments' objectives with introducing them have surely varied over time. In Ancient Greece, the island of Delos was appointed a free harbor to encourage imports (Farole 2011, p. 31). The zones have since evolved into hubs for manufacturing and even into 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.

industries. This setup has the great benefit of allowing for limited liberalization while preserving many of the rents that a government enjoys.

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, EPZs rarely live up to the high expectations and mostly bring only limited improvements to an economy (Moberg 2017). To understand why EPZs tend to succeed on some margins but not on others, I study the EPZs in the Dominican Republic, where I conducted fifty-two interviews with EPZ company representatives, zone developers, agency officials, representatives of nongovernmental organizations, and academic experts. Rather than conducting surveys, I chose the interview format to allow for observations that contribute qualitatively with context and inspiration for the theoretical and logical discussions and conclusions. The questions I asked during the interviews depended on the context. I asked company representatives and zone developers about their history, their experience with the policy reforms that the EPZs have faced throughout the years, and their current challenges and future outlook. I met with agency officials and nongovernmental organizations to understand the nature of current regulations, how they have changed, and how the political process has influenced them. Dominican academics pointed me to relevant literature and helped me to analyze the economic and political implications of EPZ policies. To ensure frank discussions, I guaranteed all the sources anonymity.

The Dominican zones exemplify a scheme with an appearance of success, with a diversified and sophisticated production and investors that employ over 160,000 people (CNZFE 2015). 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). Several small Latin American countries, such as Honduras and Nicaragua, also have successful EPZs, while the rest of the economy lags (McCallum 2011). 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 the theory of EPZs as rent-seeking schemes that often fail to generate more than marginal liberalization in a country’s

trade regime. 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.

II. 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. Because a government earns rents from interest groups seeking to influence trade policies, trade liberalization lowers its rents. As this section will show, the government can avoid this loss of rents by using EPZs to divide the economy into free-trade and protected sectors and target liberalization to those who benefit from it.

Because governments can earn rents from the lobbying of interest groups, they want to encourage businesses to try to influence trade policy to their advantage. Lobbying can benefit 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 can reward 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).²

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 its reluctance to trade liberalization, which implies that the government either abolishes tariffs or caps them at low rates. If interest groups are virtually unable to influence tariffs, their lobbying becomes futile and the government loses much of 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

² For more references to literature related to endogenous tariffs, see Magee, Brock, and Young (1989, p. 32).

protectionist interests (Rodrik 1994; Tornell 1995; Acemoglu, Johnson, and Robinson 2005). By liberalizing trade, the administration in office can earn a one-off reward from pro-reform interest groups. The administration may liberalize trade if this reward is larger than the loss of political support from protectionists. Once trade is liberalized, the government will no longer earn any rents from lobbying over tariffs, but this loss may not matter if the one-off reward is high enough. The fact that future governments will not enjoy any rents from protectionism should not concern the people currently in power. Second, the government may liberalize if pressure for liberalization emerges from outsiders such as foreign governments, academics, independent opinion makers, and other interests. While the government cannot extract rents from such people, it may be politically compelled to adhere to their demands, especially in the case of a small and weak country.

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 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, p. 46).³

With EPZs, protected import-substitution firms still lobby the government for tariffs, because the government still faces the pressure to keep tariffs down from the country's consumers. Consumers vote, so even if they do not organize to lobby, they exert some indirect pressure on the government to keep domestic prices down (Caves 1976; Grossman and Helpman 1994).⁴ The government

³ 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 run from liberalization.

⁴ Empirical support for these models is 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

thus enjoys both rent-seeking revenues and the fruits of liberalization. If the pressure to liberalize comes from domestic exporters, the government obtains a one-off reward from them. If the pressure comes from outsiders, EPZs can silence the criticism against the government.

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 rely on imports from abroad can purchase their production factors abroad tariff-free and are thus 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 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 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.⁵ EPZ programs thus persist for political reasons, independently of whether they actually are economically beneficial.

III. 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.

studies on the formation of tariffs also include Marvel and Ray (1983), Mayer (1984), Pincus (1975), and Riedel (1977). Limão and Panagariya (2007) argue, by contrast, that tariffs promote equality, which could imply a preference for the median voter in favor of tariffs. Here, I will assume that this mechanism is sufficiently muted by the price effect imposed even on the voters benefiting from the tariffs on the income side.

⁵ 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, p. 120). The price effect that results increases their return to capital in production.

A. 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, Brock, and Young 1989, p. 31). As proposed by Findlay and Wellisz (1982), we may divide interest groups between two kinds of industries: (1) exporters, which are primarily manufacturers 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 market.⁶ Import-substituting firms lobby for import tariffs that protect their particular line of production, and exporters lobby against tariffs.

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 problems (Olson 1965), such that the firms can lobby as a group in a way that maximizes their aggregate profits.

The world price for the good import-substitution firms produce is p_W , but with tariffs in place, the domestic price is p_D . The relationship between these prices is $p_D = p_W\tau$, where τ represents one plus the tariff rate. The tariff rate can be negative, which allows for import subsidies. The government maximizes its rents by setting tariffs to respond to lobbying. To keep the model simple, I propose the following function for the tariff:

$$\tau = (1 + L_{IS} - L_X - V)$$

where L_{IS} and L_X are measurements of the degree of lobbying effort by the two interest groups and V is the pressure from voters. We may assume $-1 < (L_{IS} - L_X - V)$, so that tariffs can be very high but never below -100 percent. Anything between -100 percent and 0 percent signifies an import subsidy. Because lobbyists are a scarce resource, their price rises as more of them are employed. We may use a simple linear function for the price of lobbying, P_L :

$$P_L = \alpha + \beta(L_{IS} + L_X)$$

The profit, Π_{IS} , of an import-substituting firm is:

$\Pi_{IS} = Q_{IS} * p_W * (1 + L_{IS} - L_X - V) - [\alpha + \beta(L_X + L_{IS})] * L_{IS}$
 where Q_{IS} is production by import-substituting firms, which is treated as exogenous for simplicity. Thus, $Q_{IS} * P_D = Q_{IS} * p_W *$

⁶ 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, p. 2).

$(1 + L_{IS} - L_X - V)$ is the total revenue of import-substituting firms. The total cost of lobbying is $P_L * L_{IS} = [\alpha + \beta(L_X + L_{IS})] * L_{IS}$. The import-substituting industry maximizes profits with respect to lobbying efforts:

$$\frac{\partial \Pi_{IS}}{\partial L_{IS}} = Q_{IS} * P_W - (\alpha + 2\beta * L_{IS} + \beta * L_X) = 0$$

$$L_{IS} = \frac{Q_{IS} * P_W - \alpha}{2\beta} - \frac{L_X}{2}$$

This is the level of lobbying by the import-substitution industry as a function of lobbying by exporters and exogenous variables. The more the firms produce and the higher the international price for the products they make, the larger the impact of lobbying will be for their revenue, which incentivizes a higher level of lobbying. The steeper the cost curve of lobbyists, expressed by β , the smaller is the incentive to lobby. Finally, if exporters lobby more, the impact of lobbying by import-substituting firms is smaller, which compels them to scale down their lobbying.

The profit for an exporter, Π_X , is

$$\Pi_X = Q_X * P_X - Q_X * c * P_W * (1 + L_{IS} - L_X - V) - [\alpha + \beta(L_X + L_{IS})] * L_X$$

where Q_X is the amount exporters produce and P_X is the international price of the exported goods, both of which are treated as exogenous. Production quantity and price constitute the total revenue of exporters. Exporters pay $Q_X * c * P_W * \tau$ for their imported inputs, where c is the share of produced goods that constitutes inputs they must either import or buy from domestic import-substitution firms. As previously noted, P_W is the international price of the inputs, which are the same goods that domestic import-substitution firms produce. As a result of tariff levels, exporters must pay $P_W * \tau$ for imports. Finally, $P_L * L_X$ is the cost of lobbying. The exporting industry maximizes profits with respect to lobbying.

$$\frac{\partial \Pi_X}{\partial L_X} = Q_X * c * P_W - (\alpha + \beta * L_{IS} + 2\beta * L_X) = 0$$

$$L_X = \frac{Q_X * c * P_W - \alpha}{2\beta} - \frac{L_{IS}}{2}$$

More production by exporters, higher reliance on imports, and a higher import price raise importing costs, which makes lobbying aimed to lower that cost more impactful. As with import-substituting

firms, the steeper the cost curve of lobbyists, expressed by β , the smaller is the incentive to lobby. Finally, the more import-substitution firms lobby to raise tariffs, the less exporters gain by lobbying themselves. Both import-substitution firms and exporters lobby more if their production is higher.⁷

B. Endogenous Tariff Formation with EPZs

We can now look at the effect on tariff competition of EPZs. The zones remove the incentive of exporters to lobby, by allowing them to import their factors of production tariff-free. Exporters can either buy inputs from import-substituting firms at domestic prices or import them from abroad at international prices. Assuming a negative equilibrium tariff in the absence of EPZs, they are now facing this profit function:

$$\Pi_X = Q_X * P_X - Q_X * c * P_W - [\alpha + \beta(L_X + L_{IS})] * L_X$$

Lobbying thus becomes a pure cost, and exporters are therefore better off not engaging in it at all. Thus, $L_X = 0$.

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

$$\Pi_{IS} = Q_{IS} * p_W * (1 + L_{IS} - V) - [\alpha + \beta(L_{IS})] * L_{IS}$$

The import-substituting industry derives its optimal level of lobbying thus:

$$\frac{\partial \Pi_{IS}}{\partial L_{IS}} = Q_{IS} * p_W - \alpha - 2\beta L_{IS}$$

$$L_{IS} = \frac{Q_{IS} * p_W - \alpha}{2\beta}$$

Since this is now the total amount of lobbying, the government's stream of rents might be lower than with tariff competition. The government loses the rent-seeking revenue from the exporters but enjoys higher lobbying from import-substitution firms, who are encouraged by the weaker competition in setting tariffs. Without exporters competing for lobbyists, the price of lobbying is lower. Because the effect of lobbying on tariffs is assumed to be linear, lobbying is more attractive for domestic firms. Also, without

⁷ This statement coincides with the finding of Lee and Swagel (1997) that weak and declining industries tend to enjoy greater protection.

exporters' lobbying, the tariff rate increases, both because exporters stop lobbying and because import-substituting firms lobby more.⁸

We can derive the total lobbying in the absence of EPZs by substituting the level of lobbying by import-substituting firms in the expression of lobbying by exporters and vice versa. As a function only of exogenous variables, lobbying by import-substitution firms is:

$$L_{IS} = \frac{2(Q_{IS} * p_W - \alpha) - (Q_X * c * P_W - \alpha)}{3\beta}$$

And lobbying by the exporters is:

$$L_X = \frac{2(Q_X * c * P_W - \alpha) - (Q_{IS} * p_W - \alpha)}{3\beta}$$

Total lobbying then becomes:

$$L_X + L_{IS} = \frac{Q_X * c * P_W + Q_{IS} * p_W - 2\alpha}{3\beta}$$

Recall that the total lobbying with EPZs is:

$$L_{IS} = \frac{Q_{IS} * p_W - \alpha}{2\beta}$$

If we compare total lobbying with and without EPZs, we see that lobbying will be higher without EPZs if:

$$2Q_X * c * P_W > Q_{IS} * p_W + \alpha$$

The more exporters purchase as inputs that the domestic firms produce, the more likely this is to be true. The opposite is the case for import-substituting firms' production. Also, the price of lobbyists must be sufficiently low that the loss of exporters' lobbying does not make some difference. Import-substitution firms are unlikely to start lobbying as much as they and the exporters previously did together, so total lobbying with EPZs will likely be lower. From the government's perspective, the uncertainty about whether EPZs will decrease or increase lobbying should in any case make it reluctant to introduce EPZs if it is not forced to.

The likely loss of rents for the government due to the introduction of EPZs does not mean it is irrational to introduce them. In comparison to losing all its rents by liberalizing trade, introducing EPZs looks like a bargain. The table below summarizes which outcome is worst, better, and best for exporters, import-substituting firms, the government, and the people.

⁸ This is in accordance with 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.

Table 1. Summary of actors and outcomes

	Protectionism	With EPZs	Liberalization
Exporters	Worst, as tariffs make inputs expensive.	Better, as inputs are cheaper.	Best, as inputs are cheaper and domestic suppliers are more efficient.
Import-substituting firms	Probably best. Enjoy high tariffs and demand from exporters.	Probably better. Enjoy higher tariffs but lower demand from exporters.	Worst. No tariff protection; low demand from exporters.
Government	Best. Lobbying by both exporters and import-substituting firms.	Better. Lobbying by import-substituting firms only.	Worst. Lose rents from lobbying.
Voting public	Worst, as domestic prices are high.	Better, with more jobs in EPZs.	Best, with lower prices and more jobs.

IV. Understanding EPZ Benefits

EPZs encourage businesses to produce more and invest less in lobbying. However, EPZs can also be used to avoid broader liberalization, which would further decrease misallocation of resources, lower rent-seeking, and force import-substituting firms to be more efficient (Baldwin 1969; Hamada 1974). This makes EPZs a second-best solution after more general trade liberalization (World Bank 1992; Rodrik 2013).

We may recall that the government can have various reasons to move toward liberalization. Whether EPZs are good or bad for the economy depends on what the government might do if the pro-liberalization interests find EPZs inadequate. If the government cannot use the EPZs to protect its rents, it may instead 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. 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. EPZs are beneficial if their political alternative is more protectionism.⁹

⁹ Larger and more inclusive zones, commonly labeled special economic zones, can bring about reforms by serving as showcases for more liberal policies, which can

The model also reveals how EPZs do or do not benefit the economy. They discourage some wasteful lobbying, which frees up resources. However, they also discourage EPZ exporters from purchasing material domestically.¹⁰ 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, p. 37; Aggarwal 2007, p. 14).¹¹ 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 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, p. 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 leather is exempt from the tariff, the exporter turns to the international market for supplies.

Though observers often expect backward linkages to bring about development, their absence of such linkages ends up dividing the economy. Because the regime guarantees import-substituting firms

then spread in the country as a whole. The Chinese special economic zones allegedly served as showcases by proving false the ideological preconception of capitalism as a force that would cause “spiritual pollution” in socialist China (Crane 1990, p. 94; FIAS 2008, p. 42; Madani 1999, p. 53; Van Wijnbergen and Willems 2014). More importantly, when special economic zones can be initiated by local governments, they can be used as tools for pro-reformist political minorities to incentivize policy-makers to support liberalization through a bottom-up process (Moberg 2017). EPZs, by contrast, generally lack features promoting such dynamic benefits. As government-driven fiscal schemes, EPZs are generally introduced in the country at large to enhance national-level export statistics. A government may choose to introduce more zones if they prove successful, but it can easily control this expansion and thus prevent EPZ policies from spreading beyond zone borders. This control is further enhanced as EPZs take the form of isolated industrial parks with clearly defined area limits.

¹⁰ 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, p. 1381; Rhee, Katterbach, and White 1990, p. 3; Aggarwal 2007, p.13).

¹¹ 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).

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.

V. Export Processing Zones in the Dominican Republic

EPZs are popular in Latin America, where low wages, natural resources, and access to the United States market attract investors from all over the world (Jenkins Larrain, and Esquivel 1998; Farole and Kweka 2011; Farole 2012, p. 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, Larrain, and Esquivel 1998; Rodríguez-Clare 2001; CNZFE 2014; Farole 2012, p. 7). Along with Costa Rica, the Dominican Republic has also seen a wide range of products being produced in the zones (Farole 2012, p. 4).

Despite the apparent benefits, the Dominican 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 2011; Sánchez-Ancochea 2012).

A. 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, pp. 362–65). He imposed high tariffs on protected sectors, which suffocated 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, p. 107; Pons 2010, p. 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, pp. 44, 63; Pons 2010, p. 399). However, it was also thanks to Balaguer's 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, p. 561; Betances 1995, p. 120; Schrank 2003a, p. 95). With the economic upswing came higher incomes, and with them, increased demand for imported goods, which commonly leads to more protectionism (Trefler 1993). The Dominican import-substituting industries pressured Balaguer to protect them from the imported goods, and he responded by strengthening the import-substitution regime (Fiallo 1973, p. 162; Schrank 2003b, p. 423). Compared to the Trujillo-era concessions to individual import-substituting firms, Balaguer made trade protectionism more systematic (Hartlyn 1998, p. 104).

Protectionist policies were, however, losing popularity in Latin America, and Balaguer faced pressure to liberalize trade. Critics at home protested ever-more loudly against Balaguer's protectionism (Hartlyn 1998, p. 105). The United States also started pressuring Balaguer to liberalize, 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, p. 118; Schrank 2003b; Pons 2010, pp. 398, 402). Trade openness would, however, lessen the rents that Balaguer enjoyed from the import-substituting industries (Schrank 2003a, p. 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, p. 121; Schrank 2005, p. 46). Exporters, by contrast, could obtain tariff and tax exemptions if they invested in EPZs (Schrank 2003a, p. 97). Between the benefits of tariff protection and EPZ benefits, the former was considered more attractive. Protections from trade were therefore claimed first by the Dominican elite around the capital, while less-connected businesses had to make do with the EPZs (Schrank 2003a, p. 97).

The EPZs 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. The United States did not get the level of liberalization it wanted but nevertheless accepted Balaguer's policies (Schrank 2003a, p. 95).

The scheme has the added benefit of pleasing the import-substituting industries. Thanks to the increases in tariffs, domestically oriented producers were probably happy with the new scheme. The increased protection reflected Balaguer's dependency on the support of the protected industries. As the EPZs divided the economy, import-substitution firms had more incentive to lobby for tariffs, which ultimately was reflected in the solid protectionism of the new law (Schrank 2003a, p. 95).

The EPZs threatened import-substituting firms that supplied the inputs of domestic exporters, which could use the EPZs to obtain cheaper inputs from abroad. However, this would not have been obvious initially, as the first EPZs were focused on agriculture, which inevitably would use many domestic resources. Only later did disputes emerge with the rise of apparel manufacturing, with EPZ exporters accusing the import-substituting firms of rent-seeking (Schrank 2005, pp. 46–55).

The Dominican zones thus came about in line with the framework of this paper. The government introduced them to avoid broader reforms. Exporters gained access to tariff-free imports. Import-substituting firms strengthened their protection, which may reflect their incentive to lobby for benefits in the absence of the lobbying competition from exporters. As a result, while the EPZs provided more openness, other parts of the country became more protected.

B. Dominican EPZ Persistence

Any Dominican 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. During their first decade, the zones hosted only a few, primarily foreign, companies (Schrank 2003a, p. 101). The sector began to grow in the 1980s. From 1981 to 1989, the number of EPZ companies grew from 89 to 317, the number of employees from 20,500 to 110,000, 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. By 2003, the EPZs contributed 7.5 percent to national GDP (Rhee, Katterbach, and White 1990, p. 14; Kaplinsky 1993, p. 1855; CNZFE 1992, 2013).

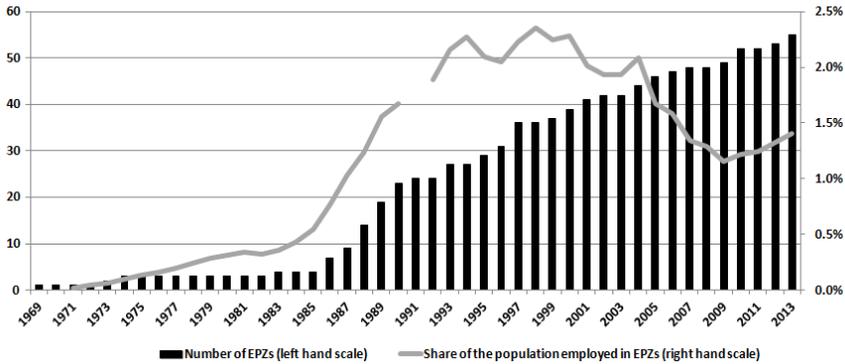
Larger size brought more political influence.¹² In 1988, to strengthen their political clout, EPZ firms and developers formed ADOZONA (La Asociación Dominicana de Zonas Francas), which became the main lobbying organization for EPZ companies and zone operators (ADOZONA 2014). Within a decade, ADOZONA 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.

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 1 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

¹² 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, p. 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, p. 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, p. 105).

Arrangement (MFA) (Hartlyn 1998, p. 140; Burgaud and Farole 2011).¹³

Figure 1. Number of EPZs (left-hand scale) and share of population employed in EPZs (right-hand scale)

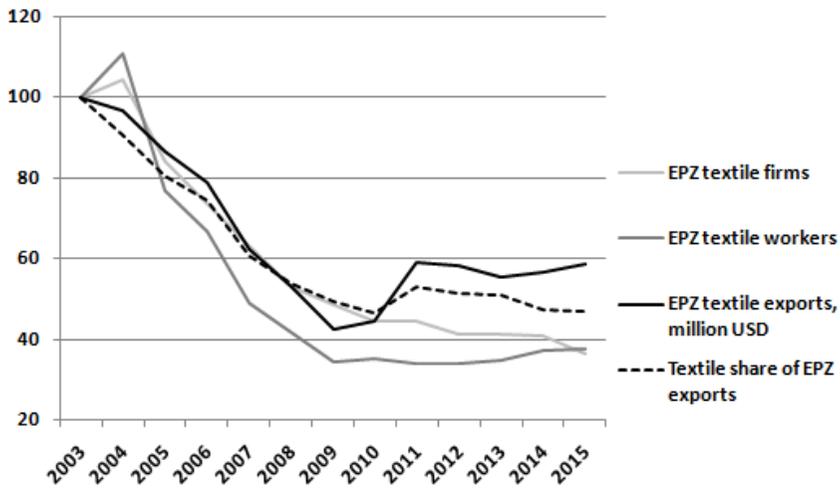


Source: CNZFE.

Since 1974, the MFA had governed international trade in textiles and apparel with a system of import quotas. These quotas 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 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).

From 2004 to 2010, the number of textile companies in the EPZs fell from 281 to 120, and the share of EPZ textile exports fell 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 2 illustrates the decline of the textile industry.

¹³ 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, p. 54).

Figure 2. Index of the decline of the free-zone textile industry (2003: 100)

Source: CNZFE.

The government's response reveals its imperative to save the EPZ sector. After a few years of the textile industry's 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 (Congress 2007). 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 to save the textile industry, stem rising unemployment, and boost the EPZ program as a whole.

The other reason for future Dominican administrations to keep the EPZs is that doing so would likely force the government 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. The country capped its tariffs at 40 percent, with higher tariffs on eight agricultural goods (WTO 1996, p. 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 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 threatens even the government's current EPZ scheme in another way. The organization prohibits its members from engaging in export subsidies, a category of subsidies under which the EPZs fall.¹⁴ The Dominican Republic therefore had to stop giving fiscal benefits to its exporters by December of 2015. One way to comply and still avoid the loss of political support from EPZ exporters would have been to abolish the EPZs and introduce low tariffs and corporate taxes for all companies. That would, however, deprive the government of both fiscal revenues and the rents from the import-substituting industry.

Instead, the government sought to find small changes to the fiscal rules that the WTO would consider sufficient changes to the EPZ model (personal interviews). It followed a similar path as several other countries in reconstructing the EPZ scheme to rely not on exports but instead on so-called "strategic sectors." This means that the government grants subsidies based on industry, rather than exports (World Bank 2014). As long as the strategic sectors match those that are already exporting, such a scheme would likely preserve the rent-seeking structure of EPZs.

C. 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

¹⁴ See World Trade Organization, Uruguay Round Agreement, Agreement on Subsidies and Countervailing Measures. 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, September 14; WTO, 2007, Document G/SCM/N/160/DOM, July 5; WTO, 2007, Document WT/L/691, July 31.

2011, p. 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, Katterbach, and White 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.

The EPZs helped change the country's export profile from agriculture companies dependent on domestic inputs to importing manufacturers. In the mid-1950s, sugar, cacao, coffee, and tobacco constituted more than 90 percent of exports (Johnston 1958, p. 22). By contrast, the EPZs are dominated by manufacturers, which are less dependent on the county's natural resources. From 1996 to 2007, most EPZ sectors bought virtually all their prime material from abroad. Table 2 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 2. 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 apparel	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 Máttar 2008, p. 27; Sánchez-Ancochea 2012; World Bank 2000, p. 25; Farole and Akinci 2011, p. 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, with medical equipment manufacturing overtaking textiles in 2014 (CNZFE 2012, 2015).¹⁵ Because medical equipment manufacturing is technically advanced, the quality requirements for their production factors are high, and this EPZ sector purchased only 0.8 percent of inputs domestically in 2007. Another growing sector, telecom services, reported no backward linkages that year (nonpublic Central Bank data).

The decline 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 the early and late stages of production in-house for foreign clothing brands. The Dominican Republic has an advantage over Asian manufacturers in offering such full-package solutions 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, p. 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 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

¹⁵ 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 equipment sterilization (interviews).

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 the 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 (CEIRD) bear witness to this logic. They work to 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 in the home market (Schrank 2005, p. 55; Burgaud and Farole 2011, p. 178).

While the EPZs have generated jobs and exports, there are few if any signs 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 International Monetary Fund for loans (Betances 1995, p. 129; Black 1986, p. 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, pp. 143–44).¹⁶ 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 low productivity: agriculture, trade, and simple services (Central Bank 2014; Sánchez-Ancochea 2012, p. 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

¹⁶ 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 left the domestic market to become EPZ exporters (Kaplinsky 1993, p. 1856; CNZFE 2013). As the EPZs started to expand in the 1980s, the rest of the economy lost 11,000 manufacturing jobs (Hartlyn 1998, p. 139).

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.

VI. Conclusion

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. 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 benefit 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.¹⁷ 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. Still, the EPZs do not benefit the country if they are used to avoid liberalization. In 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.

¹⁷ 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, p. 68; World Bank data, WB Indicators). This correlation promotes EPZs' reputation as drivers of industrialization and export diversification. Economic diversification and industrialization have also taken place in the absence of EPZs, however. 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.

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 2015). Akin to EPZs, such schemes may look like liberalizations as they promote some new business activities. Yet they may also be a way for the government to nurture rent-seeking by avoiding less distortive general tax cuts and reforms. One should never be too quick to judge the intention of a government by the outcome of its policies.

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