

Top-Down Decentralization: Special Economic Zones and Liberalization Avalanches

Abstract

Special Economic Zones (SEZs) have been touted as “tools for development”. China in particular has become the beacon of SEZ success, as the zones have played an important role in the country-wide reform process. However, in many other cases, SEZs have failed. We describe SEZs as a peculiar form of federalism, and develop a model of political elites’ dynamics to explain under what conditions one can expect SEZs to generate a transition from a rent-seeking society to a liberalized economy. Fiscal and political centralization, homogeneous interests among the political elites, and negative economic externalities of SEZs upon other regions make SEZ success less likely.

Keywords: Special Economic Zones, Rent-Seeking, Economic Reform, China.

JEL codes: O1, O2, H1, H7

Introduction

There are over 4000 special economic zones (SEZs) today, with at least 68 million people working in them (The Economist 2015). The growth of SEZs exploded after 1980. By now, more than half of all countries have introduced SEZs. Table 1 shows which countries have created the most SEZs over the past ten years (Bell 2017). With exemptions from taxes, tariffs, and regulations, the zones are meant to attract foreign direct investment (FDI), create employment opportunities, and increase demand for domestic products (ILO 2007; FIAS, 2008: 12-14).

SEZs come in many different forms and take on different labels depending on such things as areal size, target market and types of production. The most prominent SEZ success story is from China. Its SEZs allowed the Chinese government to try out reforms inside the zones, before implementing them on a larger scale (Sit, 1985; Ge, 1999: 1283; Chen, 1996; Litwack and Qian, 1998; Yeung et al., 2009: 223; Leong, 2013). They allowed the country to “cross the river by feeling the stones,” as was famously expressed by Deng Xiaoping about the gradual Chinese reform process., South Korea’s use of SEZs provides a similar success story (Schrank 2001; Sachwald 2003).

Can China’s and South Korea’s successes be reproduced? Many, if not most, SEZs have actually failed to live up to expectations (Moberg 2014). India, for example, introduced SEZs over a decade before China. Its zones seem to have been a net loss for the country, primarily due to high infrastructure costs and poor management (Moberg 2014). Ghana’s main SEZ was praised for satisfying all of World Bank’s assessment criteria (Farole, 2010b). Nevertheless, the zone failed.

< Table 1 >

Which institutional and political conditions increase the likelihood that SEZs contribute to a country's overall development? The empirical literature suggests that the standard benchmarks for assessing SEZ policies often gloss over critically important political processes (Nee 2000; Chen, Hillman and Gu 2002; Tian 2001; Brandt et al. 2004; Bruner and Oxoby 2012). Yet, a basic framework for assessing the political and institutional parts of SEZ schemes is still missing. To address this, we build a model of political elite dynamics to illustrate the conditions under which SEZs can lead to what we call a “liberalization avalanche”, which makes reform reversals unlikely. We use the example of the Chinese SEZ experience to describe how SEZs can gradually reform an economy. We show that underlining this reform process is a mechanism for changing the ruling elites' incentives, which engenders a gradual, but sustainable, transition to greater openness to foreign investment and trade.

The next section describes the SEZ concept and explains why it departs in significant ways from the standard federalist theory. In section 2, we define what we mean by “successful” SEZs, and provide a discussion of Chinese SEZs. Section 3 develops the model of SEZs creation and analyzes the potential for reform reversals. This model explains why SEZs have spurred a liberalization avalanche in China, but not in many other countries. Section 4 briefly discusses a number of examples from India, Eastern Europe and Africa where SEZs have not been successful, and explains how our model interprets these failures.

1. SEZs as an Innovation in Federalist Practice

Federalism is commonly understood as an institutional mechanism for self-governance. The

theory of federalism usually adopts a bottom-up perspective, asking why local communities would find it in their interest to give up authority to a higher level government in some domains of activity (Buchanan & Tullock 1962: ch. 8; Tullock 1969; V. Ostrom 1991; Casella & Frey 1992; Inman & Rubinfeld 1997; Buchanan 2001; V. Ostrom and Allen 2008). Since its rebirth in 1950s and 1960s (Bowie & Friedrich 1954; Macmahon 1955; Riker 1964; Burgess 1966; Earle 1968), the literature on federalism has developed a particularly interesting comparative institutions dimension (King 1982; Riker 1987; Elazar 1987; 1993; Ter-Minassian, 1997; Watts 1998; Bednar et al., 2001; Burgess 2006). At first glance, SEZs look like an extreme version of what's known as "asymmetric federalism" (Benz 1999; Stepan 1999; Beyme 2005; Congleton 2006; Swenden 2002), i.e. a federal system in which some regions are given greater autonomy, instead of all regions enjoying the same type of local autonomy. However, in the case of SEZs, the emphasis on self-governance, while not absent, is of generally minimal.

SEZs are a form of decentralization that departs from the typical federalist theory in three important ways. First, rather than being a more detailed system of local rules embedded in a larger system of higher level rules, they are *explicit exemptions* from the higher-level rules. Governments generally exclude SEZs from certain trade barriers, taxes, and sometimes also from labor and environmental regulations. As such, they enjoy exceptions from laws that other parts of the country must obey. This differs from the standard model of federalism, in a way that goes far beyond asymmetric federalism. According to the standard accounts of federalism, institutional diversity at lower administrative levels is embedded in the larger federal legal framework and laws at the local level cannot breach those at higher levels. For example, Weingast (1995) argues that the federal level is supposed to prevent protectionist policies by local jurisdictions, as a way

to sustain a resilient market order. Or, as argued by E. Ostrom (2005, ch. 9), federal level rules should assure minimal universal standards and prevent “local tyrannies”, while still allowing local experimentation. Standard federalist decentralization is a type of rule of law system, while SEZs are a type of discretionary policy.

Second, rather than being bottom-up expressions of self-governance, they are top-down granted privileges. Because with SEZs the central government explicitly allows breaches of higher level rules, they cannot be created locally without a higher-level government’s permission. In countries that have more than two administrative levels, SEZs can sometimes be granted exceptions either from central level rules or from 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). One can therefore describe an SEZ as an enclave acting as a foreign territory (Chaudhuri and Yabuuchi, 2010).

These contrasts to federalism affect the incentives to create SEZs and the conditions under which they succeed or fail. Under typical federalism, there are three common reasons for a failure of decentralization (Tiebout, V. Ostrom, Warren, 1961): (1) the local government does not have the authority to fix the problem (e.g. a source of pollution is outside its jurisdiction); (2) the transaction costs for inter-jurisdictional cooperation are too large and, hence, prevent the jurisdictions from coping with inter-jurisdictional externalities; (3) economies of scale are not properly utilized. None of these problems are the main concern in the case of SEZs because the higher-level government that grants SEZs in principle retains the power to deal with such issues.

Another contrast is that while the standard theory of federalist decentralization focuses on policy areas, SEZs focuses on geographical regions. Similar asymmetric federalism, can be seen in the special rights granted to Quebec but not enjoyed by other Canadian regions. However, in case of asymmetric federalism, the regions granted special rights tend to have long-standing historical and cultural identities. SEZ decentralization is also different in that the higher-level government carves out exceptions for the zone, but retains authority across most policy issues. By contrast, the Canadian Constitution Act of 1982 granted local governments authority in areas such as health care, education, taxation, and social benefits.

While the concern for self-governance prevalent in the literature on federalism points to the *local communities'* interests from preserving a certain level of decentralization, the case of SEZs points to the *central government's* interests in creating a certain type of decentralization where it didn't exist before.

Why, then, would members of a higher level government find it in their interest to carve out exceptions to their rules for particular areas under their jurisdiction? After all, rather than ceding control by decentralizing, people in power usually have the opposite incentive. Political elites in developing countries usually benefit from the prevailing rent-seeking system, which hardly gives them the incentive to reform their economies (Rose-Ackerman 1975; 2006; Acemoglu and Robinson 2000; 2012: ch. 8; Haber 2002; Kang 2002; Nye 2009; Brollo et al. 2013). Moreover, 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 the pro-growth policies over the long term (Boettke 2009; Leeson 2011).

In answering this question, we are thus suggesting an answer to one of the biggest questions in development economics: How can countries ever reform and move from rent-seeking societies to liberalized economies (Frye and Shleifer 1997; Blanchard and Shleifer 2001; North, Wallis & Weingast 2009; Acemoglu and Robinson 2012: ch. 3 and 11)? By understanding how SEZs can become successful, we will also see how they can generate a process towards countrywide reform.

2. SEZ Success and Country-wide Development

The success of an SEZ is not based solely on its amount of investments or structures. If an SEZ's investments and exports grow, that does not mean that the zone is good for the country as a whole, as it may be shifting investments out of other regions while imposing costs on the government in the form of infrastructure spending on lost tax revenues.

The risk of resource misallocation is particularly high if policymakers use SEZs as vehicles for rent-creation. The benefits embedded in SEZs can be used to benefit a small minority at the expense of others. By offering incentives to particular interest groups, the government reallocates resources from some parts of the economy to areas that are made artificially competitive. Hence, the SEZs can make the economy as a whole poorer, in contrast to their proposed promotion of prosperity (Moberg 2017: ch. 4).

An SEZ scheme can be deemed successful only if it promotes economic growth in the country as a whole. Whether SEZs promote development or are merely expressions of rent-seeking depends on the incentives of policymakers. In a system already filled with distortions and rent-seeking, we must ask why the government would create SEZs. Government decision makers may want to use SEZs as additional rent-seeking tools, providing special privileges to a few

politically connected businesses which would be allowed to invest in the zones. They may also use SEZs to avoid policy changes nationwide, and thus effectively stifling wider-scale reforms (WB, 1992: 3). If a majority of the political elites actually wants to liberalize the economy, they can do so more effectively by introducing general reforms, rather than selective SEZs.

SEZs can nevertheless be beneficial, in the case where people in government do not all have the same interests. There may be some reform-minded elites who stand to win from liberalization policies, but who are too few to change the system as a whole. Such an elite minority can use SEZs to change the system gradually, such that the zones lead to broader gradual liberalization. Before we explain this mechanism in more detail, we want to paint the picture of China's SEZ driven reform process, which provides an illustrative example.

2.1 How SEZs Reformed China

The Chinese reform period began in the late 1970s, and SEZs are generally acknowledged as playing a prominent part in the subsequent Chinese "growth miracle" (Ge 1999: 1283; Li, Li & Zhang 2000). China has a decentralized system, both fiscally and politically. Xu (2011) describes the Chinese system as a "regionally decentralized authoritarian regime". Because the central authority appoints local officials, it is not a standard federal system, although the country is both politically and fiscally decentralized (Xu 2011; Liand Zhou 2005).

The disputes surrounding the SEZs and the lack of government consensus on the policy reveal the heterogeneity and divergent interests of the Chinese elite. 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).

More members of the Chinese elite started supporting the SEZs as they grew in quantity and size. As a result, the SEZ could continue despite 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.

The lack of consensus surrounding the zones prompted reform gradualism. SEZs initially did not enjoy much political independence from provincial and state authorities. This 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 (Crane 1990: 55). In 1984, further reforms gave SEZ factory managers substantial responsibilities (pp. 82-5). Growing SEZ support also prompted the central government to 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).

To appease the elites fearing the loss of their rent-seeking revenues, the reformers also agreed that the SEZs would aim to attract more foreign investors and fewer national companies. This should have lowered 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 catering to protected businesses 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, seeing 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 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 stood at 95% (Wang 2013: 136; Alexander 2014).

Concurrently, China liberalized nationally. Between 1980 and 1985, China's score in the Fraser Institute's Index of Economic Freedom improved substantially, from 4.0 to 5.1, followed by further improvements to 6.39 in 2012. 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 2014).

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. In the next section, we lay out a model that explains how SEZs played a transformative role in China. It

illuminates the importance of particular institutions, without which it would be hard for other countries to follow China's example.

3. A Model of SEZ-driven Liberalization Avalanches

The heterogeneity of elites and the need to agree about an SEZ at the central level are critical factors for understanding the process by which SEZs may promote economic development. Our model is based on two simplifying assumptions. First, while treating government as a heterogeneous group of individuals, rather than a monolithic agent (Wagner 2007; Eusepi and Wagner 2011), it simplifies this notion by assuming that this heterogeneity is due solely to divergent opportunities. This part of the model expands on Blanchard & Shleifer's (2001) framework for top-down control in a federal system by including heterogeneous political elites and rent-seeking at the central level.

Second, we build on the standard public choice account of the transition from mercantilism that emphasizes the switch of government revenues from rent-seeking to taxation (Ekelund & Tollison, 1981; Nye, 2007; Braithwaite, 2008, ch. 1). The Ekelund & Tollison (1981) rent-seeking model has been used to describe both real-life socialism (Levy 1990; Shleifer & Vishny 1992; Anderson & Boettke 1997) and state capitalism (Aligica & Tarko 2012). While simple, it helps us describe elite dynamics in a country like China.

3.1 The case of a homogeneous, pro-growth central government

In Blanchard and Shleifer's (2001) model, 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 in the form of rents from rent-seeking, generated from pursuing growth-suppressing policies.

A central government can raise the magnitude of p both by rewarding local officials for good economic performance and by deposing them if they perform badly. 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)”. They 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 can be captured by growth-oppressing interests, while the central government cannot. The analysis thus ignores the possibility that central government officials prevent reforms because they benefit from the rent-seeking system. Without accounting for rent-seeking at the central government level, Blanchard and Shleifer do not provide an explanation for how reform can come about by a central government that does not already stand united behind reform.

Much of Western European economic history tells of the adverse motives of ruling elites (Ekelund & 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.

3.2 Elite heterogeneity in a rent-seeking society

By introducing elite heterogeneity, we can analyze the internal dynamics of a rent-seeking government. We build our model on the trade-off between rent-seeking and taxation, and we assume that local leaders have discretion over local policies and can thus determine the balance between taxation and rent-seeking.

A local leader who decides to rely more on taxation rather than on rent-seeking will want to host an SEZ to increase tax revenues further. This is because SEZs liberalize the economy more than the prevailing central-level rules allow, through its exemptions from federal taxes, tariffs, and some regulations. But 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 allows for SEZs as a response to demand from local elites who benefit from them. To return to China, the first initiative there for the creation of an SEZ 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, making Minister Fei one

of the early proponents of zones within the central elites. The government subsequently declared the Shekou Industrial Zone in 1979 (Sit, 1985: 75; Crane, 1990: 26, 156). Thus, although the zone was established from the top-down, the initiative reflected local interests.

The heterogeneity of central decision makers stems from the divergent interests of the local leaders with whom they are connected. In a system based on crony relations, the central level elites depend on connections with local elites, and different central elites have different local connections (Aligica and Tarko 2014). The divergent interests of the local elites stem from the fact that some local leaders can see higher profits from taxing an open economy than others. Some areas have higher growth potential than others, because they are more attractive to investors. For example, an area on the coast benefits more from tariff exemptions because they can more easily attract exporting investors. In other areas, local practices and institutions may prevent effective tax collection, thus raising the cost of extracting taxes. The locations of early Chinese SEZs reflect this larger potential of some geographical areas. All this means that elite heterogeneity does not stem so much from divergent preferences, as from divergent cost of rent-seeking and taxation.

The trade-off between taxation and rent-seeking for the local elites can be expressed as a revenue-maximizing Leviathan model. For illustration, we are using the example of a Cobb-Douglas production function with constant returns to scale, but the result holds for a broad range of production functions (see Annex for the general proof):

$$\text{Log } f(T, R) = \lambda \text{Log}(T) + (1 - \lambda) \text{Log}(R) \quad (2)$$

λ denotes the level of local liberalization, i.e. the balance between the potential revenue from taxation versus rent-seeking. We assume that the parameter takes on the values $0 < \lambda < 1$.

This setup is similar to that of Blanchard and Shleifer, with the revenue from taxation, $T = pay$, while the revenue from rent-seeking is $R = b$. When $\lambda = 1$, no revenue is generated from rent-seeking. This corresponds to an idealized society governed by the rule of law. When $\lambda = 0$, the elites get all their revenues from rent-seeking. Classical mercantilist societies in Europe approached this, primarily due to low state capacity (Ekelund and Tollison, 1981; Nye, 2007). In the simplest form, we may identify f as revenue, although it may include non-financial considerations, such as positional goods and power.

We model elite heterogeneity through their different costs of extracting taxes or implementing the privilege system that attracts rent-seeking. Let C_{tax} and C_{rents} represent the administrative costs of taxation and rent-seeking respectively. The total revenue obtained by taxing and/or rent-seeking is limited by the production possibility frontier (PPF). We assume constant opportunity costs of taxation or rent-seeking, i.e. a linear PPF, $B = C_{\text{tax}}T + C_{\text{rents}}R$, where B is the total budget of a local elite.

Maximizing f with respect to T and R , subject to the PPF constraint, gives the share of rent-seeking and taxation for each region:

$$\begin{cases} T = \lambda \frac{B}{C_{\text{tax}}} \\ R = (1 - \lambda) \frac{B}{C_{\text{rents}}} \end{cases} \quad (3)$$

< Fig. 1 >

We can interpret these as the local Leviathans’ “governance functions”, identifying the extent to which they specialize in rent-seeking or taxation. Figures 1a and 1b illustrate this. When liberalization in a region is low (low λ), the revenues from rent-seeking rise above the revenues from taxation. By contrast, increased liberalization (high λ) raises the potential revenues from taxation while lowering the revenues from rent-seeking.

3.3 Political and economic externalities of SEZ creation

The introduction of an SEZ is not an isolated event, as liberalization in one area generates economic and political externalities for other regions. We can model these externalities in the following way: An SEZ in region k , generating a local change $\Delta\lambda_k$, creates an institutional externality on the other regions: $\Delta\lambda_i = L_{ik}\Delta\lambda_k$. When $0 < L_{ik} < 1$, the externality of k upon i is in the liberalizing direction. By contrast, if $-1 < L_{ik} < 0$, liberalization in k would decrease liberalization in area i .

The liberalization externality affects the trade-off local leaders make between taxation and rent-seeking policies. We can see this by introducing the governance functions (3) back into the production functions (2). We obtain the revenue of each local elite member given the existing level of liberalization in their region (fig. 2 and 3):

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

This expression shows that no member of the elite is ever fully satisfied with the

existing degree of liberalization, since they will generally prefer either a higher or lower level of λ . However, this level of liberalization cannot be determined solely by local elites, because there are political externalities between regions and as well as a certain level of control from the center. The externality generated by liberalization elsewhere either increases or decreases the revenues, $f(\lambda)$, of local elites. Whether they are in favor or against more liberalization thus depends on the current level of liberalization in their regions.

< Fig. 2 and 3 >

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 for which $0 < L_{ik} < 1$. Because $f(\lambda)$ 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 thus also for more SEZs (fig. 2). 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 (fig. 3). For them, after the creation of the SEZ, further liberalization increases revenues, while smaller reversal in the direction of less liberalization decreases it: $f(\lambda + \Delta\lambda) > f(\lambda - \Delta\lambda)$.

In theory, the creation of an SEZ could either spur more liberalization or generate a backlash, since we can imagine that L_{ik} could be negative. Overall, the creation of zone k spurs further liberalization if its average institutional externality is greater than zero:

$$\langle L_k \rangle = \sum_i L_{ik} > 0 \quad (5)$$

If the liberalizing externalities of SEZs are positive, the creation of one SEZ thus tends to lead to the creation of further SEZs. There several possible factors that suggest this is the case. Simmons and Elkins (2004) show that reputation effects can significantly affect the diffusion of liberalization policies. China's SEZs similarly seem to have had positive investment-related externalities. Wang (2013) finds that SEZs lead to more investment even in other areas of the country, so that the zones did not grow at the expense of other regions. Such spillovers to the local economy increase the benefits of relying more on taxation and less on rent-seeking, and, hence, contribute to the positive institutional externality. SEZ might also create broader demand for factors of production outside the SEZ. This will also contribute to the liberalization externalities of SEZs.

As one zone gives more members of the elite the incentive to support further SEZ initiatives, more local leaders will want to pursue an SEZ for their region. As the elites against SEZs become fewer, it becomes increasingly cheap to obtain the approval of central government. With a growing share of local leaders in favor of SEZs, the SEZ opposition loses steam. Eventually, a majority of the elites prefers liberalization, and can pursue broad liberalizing reforms without having to introduce more SEZs. Broad liberalizations will incentivize even more local leaders to dismantle their rent-seeking systems in favor of economic growth and taxation.

3.4 Credible commitments to market reforms

Development policies work only if the government can credibly commit to them (North & Weingast 1989; Boettke, 2009). This will not be the case with SEZs if the government that

created the zones may be just as quick to reverse them. If the government can gain from expropriating the wealth SEZs create, or from depriving investors of their benefits, the SEZs are not credible. If investors do not believe that the government will keep the rules in place, they will likely not be attracted there in the first place. We will see examples of this in the next section.

A government can credibly commit to the SEZ scheme only if the policy is incentive compatible. As we have shown above, if the average liberalization externalities are positive and a liberalization avalanche starts, SEZs will generate their own incentive compatibility, by making more and more elite members benefit from liberalization. The policy is thus not dependent on any other mechanism to prevent its reversal. There is no need for benevolent elites because the policy is not in danger of reversing under less benign future administrations. SEZs are therefore not a way to lure companies to make investments that a future government can expropriate.

The incentives supporting the sustainability of SEZ-driven reforms may be even stronger than those supporting fiscal decentralization generally. If a country is fiscally centralized, tax revenues are collected to the center and redistributed back to the local levels according to central-level political decisions. Local leaders do not obtain the tax revenues from a growing local economy and have therefore little an incentive to support pro-growth local policies. They will likely benefit more from various rent-seeking schemes. Under fiscal decentralization, local political elites can be the residual claimants of local reforms that bring higher tax revenues.

Weingast, Montinola and Qian (1995) describe China as a system where the central government is committed to preserving federalism, but Chen, Hillman, and Gu (2000) and Chen (2004) show that this commitment has not been all that credible. The Chinese central government had revenue-sharing agreements with the local governments according to which the local

governments would keep a certain fraction of the local taxes they collected. But when the central government's revenues decreased, this weakened the revenue-sharing arrangements with the local levels prompting the central government to set up its own tax collection. In other words, contrary to Weingast, Montinola and Qian (1995), the central government could not make a credible commitment to the revenue-sharing agreements. The recentralization incentivized local governments to rely more on rent-seeking for their revenue, thus undermining the liberalizations encouraged by the previous decentralized system.

Interestingly, even as the promise of fiscal decentralization was broken, SEZs still remained relatively unaffected. This is precisely because they are defined as exceptions to the rules. Because the zones enjoy substantial independence compared to local jurisdictions under standard federalism, they can enhance the credibility of reforms. Therefore, despite the decline in fiscal decentralization, the creation of SEZs in China could continue unabated (Wang, 2013). The SEZs may thus have served as a more robust substitute to standard federalist decentralization. This can be understood in terms of the elite incentives dynamics described earlier in section 3.3.

4. Why SEZ Schemes Often Fail

The model we have presented not only shows why the Chinese SEZ scheme succeeded but also how SEZ schemes can fail to bring about economic reforms despite superficially looking like successes. We previously addressed the question of whether SEZs create positive institutional externalities upon other regions. While externalities in most countries would be positive, a country may have an institutional set-up making them negative, in which case the dynamics depicted in fig. 3 do not play out.

The absence of heterogeneous elites would also not be commensurate with a

liberalization avalanche. Homogenous elites suggests that the government must be in agreement to implement SEZs for them to come about. However, if the officials are in fact pursuing liberalization, they should be pursuing broader reforms, which are less complicated and distortionary and more effective than SEZs. If policy-makers are not pursuing liberalization, they may be introducing SEZs simply to create rent-seeking opportunities, or to create scapegoats to avoid broader reforms (Moberg 2017: ch. 4). Hence, with a unified government, SEZs are either a mistake or a deliberate tool for rent-creation. We will look at some real-world cases to see how SEZ schemes have failed in the past.

India's SEZ scheme, initiated in 1965, failed for a long time to generate much investment or employment (Gopalakrishnan, 2011: 139). Here, an obvious problem was that the program was highly centralized, with the government determining both the location and often the type of production in different zones (Seshadri and Storr, 2010). Not only did this make it hard for the Indian government to get the scheme right. It meant that the SEZs were an inferior solution to broader liberalization, which the central government could have pursued if it actually stood united in favor of reforms.

With a new SEZ law, introduced in 2005, the Indian government took some steps towards decentralization. The initiative was an explicit attempt to emulate the Chinese SEZ success, by creating larger zones (Mitra, 2007: 15). However, imitating the superficial features of the Chinese program is unlikely to hardly make the Indian SEZ scheme successful. The SEZs are still created primarily on state government initiatives, instead of being driven by reform-minded elites with more local interests. As such, India would be better off with broader reforms.

Poland's SEZ scheme also looks like a scheme driven by other motivations than

general reforms. In the 1990s, the Polish government used SEZs as a redistribution tool, meant to revitalize areas devastated by the industrial decline that followed the collapse of socialism. The scheme was highly centralized, which allowed the government to reallocate resources from more successful to less successful areas. However, this also meant that the SEZ framework was open to manipulation, which allowed businesses to influence the policy to serve their interests. As a result, while the scheme expanded greatly, the SEZs looked more like vehicles for rent seeking. They likely played a larger role in misallocating resources than promoting development in the country as a whole (Gwosdz et al., 2007: 831).

More than half of Sub-Saharan countries have introduced SEZ schemes, but most of them have shown disappointing performance. Investment attracted to African SEZs has often been unsustainable and vulnerable to political developments (Farole, 2011: 67-69). Nigeria's zones sparked a conflict with the customs authorities, which refused to give up their revenues by implementing lower tariffs (Farole, 2010a: 20). The zone program in Senegal in 1991 served primarily as a safety valve for protected domestic businesses (Baissac, 2011: 12).

Ghana may provide the best example of how SEZ schemes can fail despite superficially superior design. Introduced in 1995, Ghana's SEZ program looked promising by the standard benchmarks. According to a World Bank report, it was "one of the best designed, most flexible, and most innovative" in Africa (Farole, 2010b: 23). It had stable of rules and codes that contributed to a seemingly secure and reliable business climate (Farole, 2010b: 12). Ghana also relied on the private sector for zone development, which is regarded as "best practice" for SEZs (Farole, 2010b: 15). Like China, Ghana introduced large zones, diversified into a wide range of businesses, including services (Farole, 2010b: 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, 2010b: 12). Superficially, it seemed that Ghana would be at least as successful as China in using SEZs to promote reforms.

However, the SEZs in Ghana were not driven by bottom-up profit motives. Instead, they were created under a political agreement as part of the central government's industrialization strategy (Ansah, 2006). As a result, it lacked liberalization externalities. The centerpiece of the scheme was the SEZ in the port of Tema, about 16 miles east of Accra (Farole, 2010b: 3). The government granted the right to develop the Tema zone and the control over the development of Ghana's Port Authority to Business Focus. This was a company owned by Datuk Shah Omar Shah, a Malaysian businessman with close links to the Malaysian prime minister and his party (Ansah, 2006: 274; Farole, 2011: 193). However, when disagreements erupted over infrastructure and service delivery at Tema, Business Focus halted its ongoing development, and Ghana's government was unable to make the company resume its work (Ansah, 2006: 286; Farole, 2010b: 4). The SEZ at Tema was more or less deserted until 2005, when the World Bank started sponsoring the project (Farole, 2010b: 4; Shan, 2011).

As of late, the SEZ scheme has been described as a relative success in the African context (Farole, 2011: 70). However, by 2009, around 98% of its FDI originated in single factory zones, which are not really zones but rather single companies enjoying special privileges. Single factory zones, reflecting companies' ability to obtain fiscal favors from the government, are hardly harbingers of national reform. In 2010, such companies accounted for 36% of the country's exports, while the zone at Tema stood for only 8% (Farole, 2010b: 9, 11).

The problem with Ghana's SEZs was not a misfortunate zone location. The Tema port

has been important for Ghana's economy for decades. Ghana was in no way a country somehow incapable of reform. It saw substantial liberalizing and growth-promoting reforms more than a decade before the SEZ. Instead, the problem was that those initiating the SEZ scheme lacked the incentive to create a zone that could attract enough investors, and thus promote broader liberalization in the country. In part because of a cumbersome registration process for SEZ firms, policies at Tema were actually no freer than the rest of the country (Farole, 2010b: 16, 18).

An SEZ is more likely to be successful when the initiative is driven by the incentive of local communities. SEZs are thus more likely to succeed when they are closer to the standard doctrine of federalist self-governance, despite their top-down legal origin. The absence of local interest in SEZs is a red flag, warning that the potential economic benefits of the zone may not actually be there. This signal of future SEZ success, we argue, is much more reliable than the standard criteria of success, such as proximity to a port, or strong central government commitment.

Conclusion

We have argued that special economic zones (SEZs) can be a powerful tool in the pursuit of countrywide liberalizing reforms. It is often assumed that economic liberalization depends on a unified leadership that is committed to reform (Haggard et al., 1990: 26; Sachs, 2012). Centralized power under a benevolent despot or a unified leadership is seen as a condition for reliable economic reforms (Blanchard and Shleifer, 2001). 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, but that such circumstances actually make them less likely to succeed.

The Chinese SEZs emerged in the right institutional and political context and came to play an important role in China's reforms (Litwack and Qian, 1998). The prospect of higher tax revenues led local officials to push for their creation. Thanks to a fractionalized government, the Chinese SEZs could expand despite the opposition of powerful government officials to liberalization. It was thus not by happenstance that the Chinese SEZ expansion coincided with the country's economic liberalization.

Decentralization not only explains China's success, but also why different countries see different results from SEZ programs that on the surface look similar. In centralized systems, local elites in politics and business do not have an incentive to pursue economic liberalization by means of SEZs. Any zone is therefore either a misguided initiative or a tool for rent-creation by the government.

The main problem with SEZs is not that they fail to live up to the goals of their initiators. It is that under the wrong circumstances, these goals are not economic liberalization and growth, but political favors and rent-seeking. The examples of SEZ failures illustrate how centralization and political unity can make SEZs vehicles for rent-creation and in other ways fail to contribute to a country's economy. Whether SEZs promote development depends on the incentives faced by the policymakers who choose to use them.

Annex

Problem: Let functions $T(\lambda)$ and $R(\lambda)$ be obtained by maximizing $f(T, R, \lambda)$ subject to the constraint $B = \tau T + \rho R$. Find $f(T, R, \lambda)$, such that $\forall \lambda \geq \Lambda$, $h(\lambda) = f(T(\lambda), R(\lambda), \lambda)$ is a monotonously increasing function.

Solution: Function $h(\lambda)$ is monotonously increasing iff it has at least one minimum for $\forall \lambda \geq \Lambda$. Technically, we are good searching for an extremum, as the f can be redefined as $-f$, if the rightmost extremum happens to be a maximum. To find the extremum, we define the Lagrangean:

$$L(T, R, \lambda, \mu) = f(T, R, \lambda) + \mu[B - \tau T - \rho R]$$

Maximizing the Lagrangean leads to the following set of equations:¹

$$\begin{cases} \rho f_T - \tau f_R = 0 \\ \tau T + \rho R = B \end{cases} \quad (1)$$

We define the Jacobian determinant:

$$J(T, R, \lambda) = \rho f_T - \tau f_R$$

Furthermore, we add the condition that h has an extremum:

$$\frac{dh}{d\lambda} = 0 \Rightarrow \frac{d}{d\lambda} f(T(\lambda), R(\lambda), \lambda) = f_T \frac{dT}{d\lambda} + f_R \frac{dR}{d\lambda} + f_\lambda = 0 \quad (2)$$

We obtain functions $\frac{dT}{d\lambda}$ and $\frac{dR}{d\lambda}$ by differentiating system (1):

¹ We use the subscript notation, $\frac{\partial f}{\partial x} \equiv f_x$.

$$\left\{ \begin{array}{l} \frac{d}{d\lambda} J(T, R, \lambda) = 0 \\ \frac{d}{d\lambda} (\tau T + \rho R) = \frac{d}{d\lambda} B \end{array} \right. \Rightarrow \left\{ \begin{array}{l} J_T \frac{dT}{d\lambda} + J_R \frac{dR}{d\lambda} + J_\lambda = 0 \\ \tau \frac{dT}{d\lambda} + \rho \frac{dR}{d\lambda} = 0 \end{array} \right. \Rightarrow \left\{ \begin{array}{l} \frac{dT}{d\lambda} = \frac{\rho J_\lambda}{\tau J_R - \rho J_T} \\ \frac{dR}{d\lambda} = \frac{\tau J_\lambda}{\rho J_T - \tau J_R} \end{array} \right.$$

Substituting these in eq. (2) we obtain:

$$f_\lambda(\tau J_R - \rho J_T) = 0$$

Consequently, a sufficient condition for function $h(\lambda)$ to have a minimum is for

$$f_\lambda(T(\lambda), R(\lambda), \lambda) = 0$$

All production functions that obey this condition lead to the same conclusion as the Cobb-Douglass production function we use in the main text.

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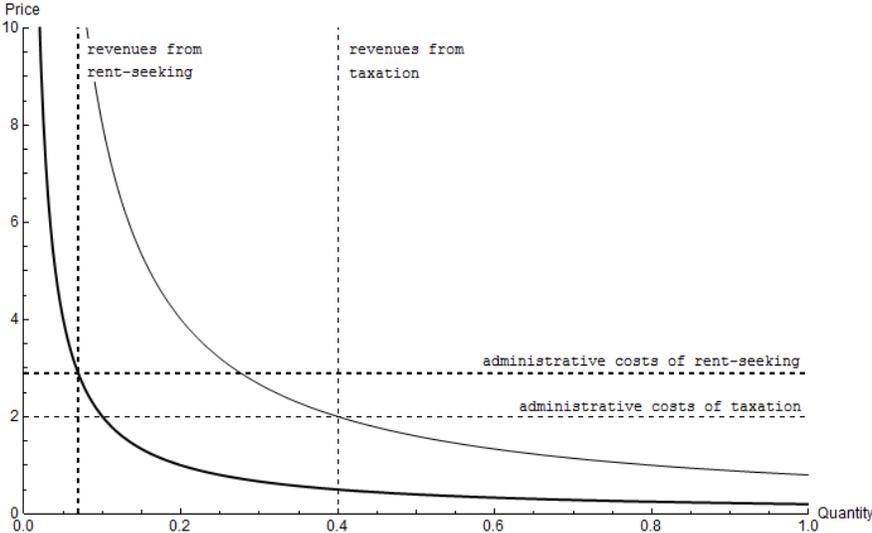
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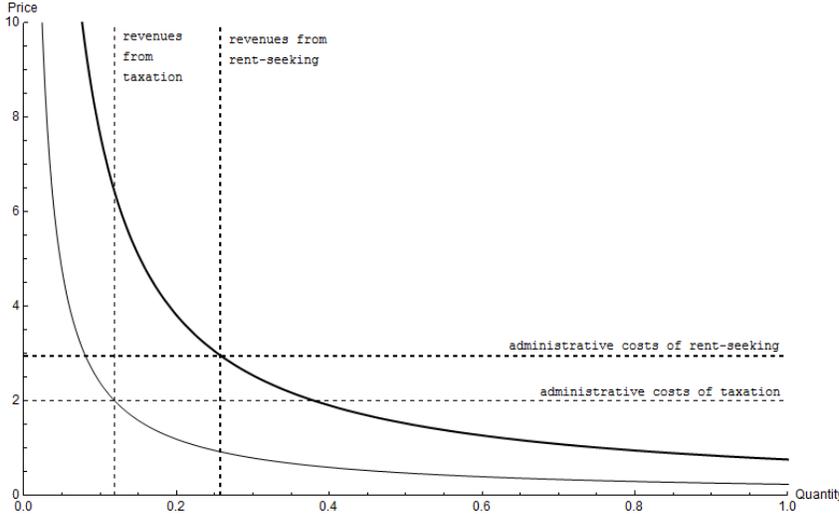
Figures

FIGURE 1: Governance functions under the rent-seeking/taxation trade-off

(a) For a liberalized system



(b) Under low liberalization



Legend: thick line: demand for rent-seeking; thin line: demand for taxation

FIGURE 2: Incentive compatibility: supporters of SEZ prefer further liberalization, rather than a reversal of reform

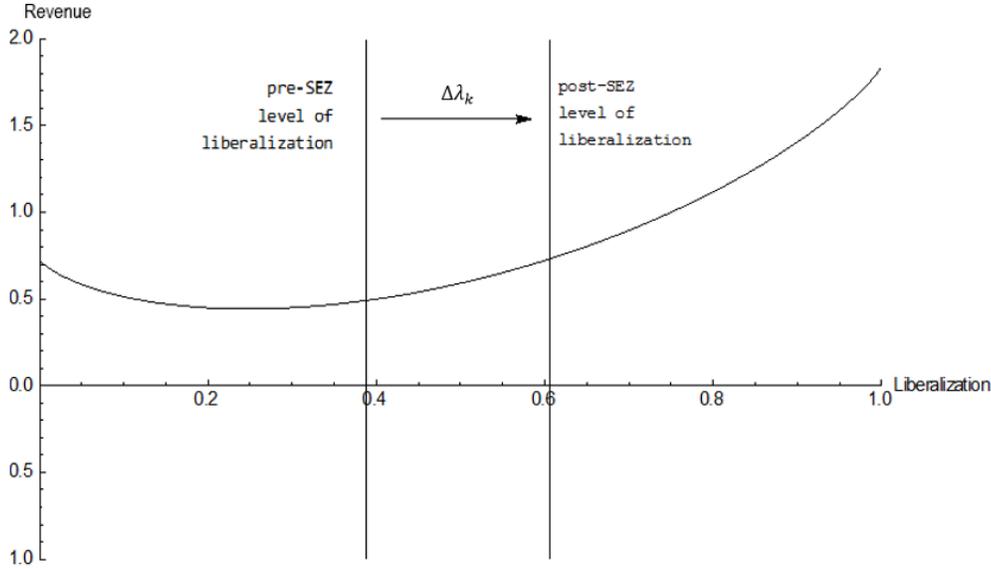
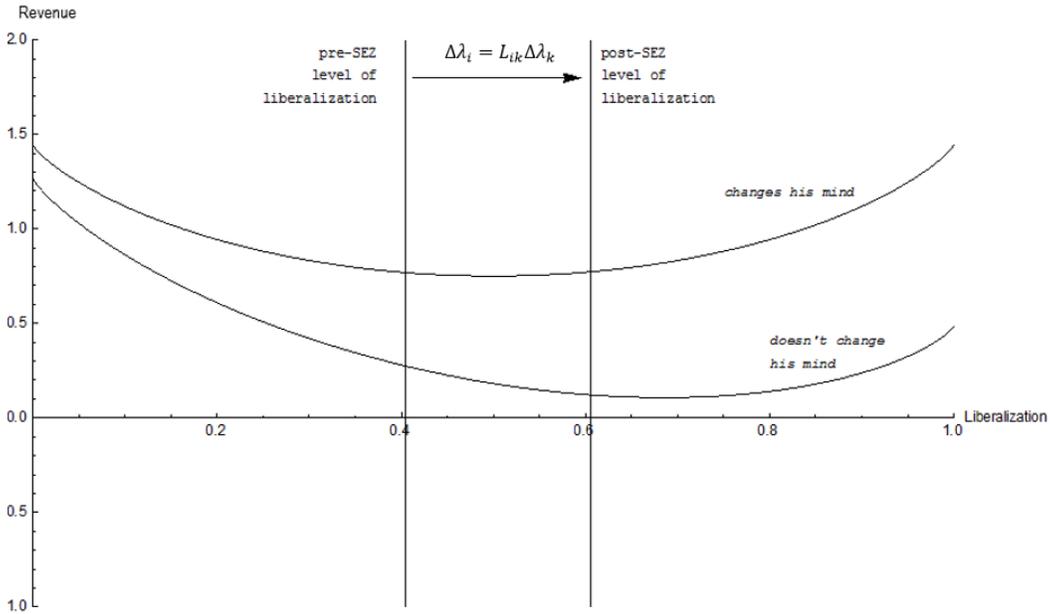


FIGURE 3: Appeasement of opponents: when liberalization externalities are positive, some opponents of SEZs change their mind



Tables

TABLE 1: Growth of SEZs in the last 10 years

Country Name	ILO2007	Bell2016	New Zones
Bangladesh	5349	6309	960
Philippines	78	277	199
India	8	193	185
China	168	295	127
Colombia	12	104	92
Honduras	26	102	76
Saudi Arabia	8	49	41
United States	256	289	33
North Korea	0	26	26
United Arab Emirates	16	38	22
Japan	2	22	20
Nigeria	6	24	18
Russia	1	16	15
Kosovo	0	11	11
Denmark	0	10	10
Kazakhstan	0	10	10
Laos	0	10	10
Oman	0	10	10
Turkmenistan	0	10	10

ILO2007 is the International Labor Office count (Boyenge 2007)

Bell2016 is the most recent available count (Bell 2017)