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## **Building Effective Clusters and Industrial Parks**

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## INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

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## **ABSTRACT**

It is a daunting task to build institution and infrastructure over a short time period in developing countries. But in the absence of sound institutions and adequate infrastructure, it is difficult for economic transformation to take place. An alternative is to facilitate existing industrial clusters or build industrial parks by creating an enabling environment in a limited place. This paper reviews the commonly used strategies to build effective clusters and industrial parks. Clusters and industrial parks are location specific. Because they have an informational advantage, local governments are in a better position than the central government to identify and solve the bottlenecks that affect clusters and industrial parks. As clusters and industrial parks evolve, new bottlenecks emerge, thereby requiring new solutions. This in turns calls for continuous tinkering by local governments. It is important to place local governments and business communities in the driver's seat of local economic growth so that they can watch out for and adjust to the bumps in the road ahead.

**Keywords:** industrial cluster, industrial park, special economic zones, quality upgrades, go-as-a-group

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# 1. INTRODUCTION

Industrial clusters and industrial parks are a worldwide phenomenon. Clusters and industrial parks in developed countries are the subject of a large body of literature. Michael Porter popularized the concept of “clustering” in 1980 through his seminal article *Clusters and the New Economics of Competition*, where he explained the advantages of industrial agglomeration in developed countries. Subsequent studies have primarily analyzed economic agglomeration that spans regions and industries in the context of developed countries, where institutions and infrastructure are relatively well developed (Porter 1990; Saxenian 1994; Markusen 1996).<sup>1</sup>

In fact, the ideas behind clustering have a long pedigree. Smith (1776), using the example of linen shirts, illustrated how the putting-out system was widely practiced in the United Kingdom prior to the Industrial Revolution.<sup>2</sup> The putting-out system was popular not only in the United Kingdom but also in Western Europe. Marshall devoted four chapters in his seminal book *Principles of Economics* (1920) to industrial districts, a term preceding clusters. Similar arrangements have been observed in the Japanese garment industry during the 19th century (Nakabayashi 2006).

Clusters are also ubiquitous in developing countries. For example, in Thailand, the “One Tambon, One Product” program has been widely promoted. Under it, each Thai tambon (subdistrict) is encouraged to develop its industry centering around one key product. The Philippines also adopts a similar “One Town, One Product” program. Long and Zhang (2011) show that the cluster-based model has been a defining feature of Chinese industrial growth over the past several decades. Sonobe and Otsuka (2006) discuss both the pattern and the mechanism of cluster-based industrialization in Asian countries. Oyelaran-Oyeyinka and McCormick (2007) present nine case studies of clusters across seven African nations, suggesting that clusters are common across the world.

In this chapter, we review clusters and industrial parks in developing countries for two reasons. First, compared with the rich body of literature on clustering in developed countries, the literature on the phenomenon in developing countries is more scant. Second, the strategy of creating clusters and industrial parks fits particularly well with certain comparative advantages often found in developing countries.

The absence of formal institutions, such as contract enforcement, is an endemic problem in the developing world. In addition, entrepreneurs face financial constraints when starting and running a business. The task of fixing institutional problems and developing sound financial systems overnight in developing countries is daunting. Despite such challenges, developing countries do have some comparative advantages, such as strong social capital in communities and abundant labor. In close-knit communities in developing countries, people often know each other well and develop strong social trust. Compared with the scarcer financial capital, labor is generally more abundant. Clustering offers an alternative way for developing countries to make better use of their existing strengths (abundant labor and strong social capital) to overcome the seemingly insurmountable financial and institutional constraints.

Marshall (1920) highlighted the three major advantages of industrial districts (clusters): better access to suppliers and markets, labor market pooling, and spillovers of technological know-how. When final-goods and intermediate-input markets are nearby, firms save on marketing and purchasing costs. When a large number of firms work in the same sector, workers are more willing to invest in their skills because they are portable across firms in the cluster. Proximity to other producers enables one to quickly learn the technologies prevalent in the cluster. All these advantages lower the transaction costs of operating a business in a cluster. Apart from the three major advantages Marshall identified, clusters have a few additional advantages. In clusters, a production process can be divided into many incremental steps, which are undertaken by various family workshops. Such a fine division of labor largely reduces the

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<sup>1</sup> See Ciccone and Hall (1996) and Ciccone (2002) for reviews of the clustering effect in the United States and Europe, respectively. See Fisher and Peters (2002) for a review of special economic zones in the United Kingdom and the United States.

<sup>2</sup> The putting-out system operated as follows: merchants acquired orders from the market and organized production by outsourcing incremental steps to nearby skilled workers and farmers, who finished the work in small-scale family workshops (Hounshell 1984). The concept of the putting-out system predates the concept of clusters. But, in essence, the two are similar.

capital requirement to start a business in each step of production (Ruan and Zhang 2009; Long and Zhang 2011). In addition, due to strong social capital and proximity to each other, businesses in clusters extensively use inter-firm trade credit, which reduces their reliance on external funding for working capital. With a lower starting capital requirement and less working capital constraints, many previously financially constrained entrepreneurs can set up businesses in clusters, enabling them to create more employment opportunities, which developing countries desperately need.

Mainstream economic theory suggests that the frequent subcontracting and fine division of labor within clusters would involve higher coordination costs (Becker and Murphy 1992; Williamson 1975, 26–30). However, in reality it is widely observed that in clusters, thanks to repeated transactions, freely flowing information, and a strong social trust embedded in communities, entrepreneurs rely heavily on relational contracts to get around the problem of weak contracts (Greif 1993; Ruan and Zhang 2009; Long and Zhang 2011). They rarely sign any formal contract in clusters. The transaction costs are much lower than previously thought in the literature. Private ordering becomes a major means to sort out contract disputes in the absence of formal institutions.<sup>3</sup>

China's industrialization offers a good example in support of this story. China has become industrialized in just a few decades despite an initial lack of sound institutions and a well-developed financial system. The conventional wisdom in textbook economics cannot explain the puzzles behind China's rapid growth.<sup>4</sup> Long and Zhang (2011) provide evidence that clustering plays a key role in driving China's rapid industrialization by lowering starting capital barriers and reducing reliance on working capital.

Clusters are often organically formed from existing industries as determined by historical legacy (Miller and Cote 1985). The role of government is normally limited at the initial stage. Yet governments, and in particular local governments, can help facilitate the growth of existing clusters. In some parts of the developing world, clusters are absent. Due to lacks of good infrastructure and sound institutions at the national level in developing countries, it is hard to create a new industry from scratch on a large scale. Instead, governments or business communities in developing countries often prefer to build industrial parks in a limited geographic area, in which adequate infrastructure and an enabling business environment can be provided. They aim to attract foreign or domestic direct investment in the industrial parks in order to promote employment and facilitate technology transfer. Whereas clusters and industrial parks share the advantages of economic agglomeration, they differ fundamentally in terms of origin, entry barriers, composition of enterprises, and their entrepreneurship impacts on the local economy. The most prominent distinction is the degree of government intervention at the initial stage. In this chapter, we review the experiences of and lessons learned from building clusters and industrial parks.

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<sup>3</sup> Private ordering is the process of setting up of social norms by parties involved in the regulated activity (in some manner), and not by the State. Private Ordering aims to achieve public goals, such as efficiency, enhancing the market, and protecting rights

<sup>4</sup> In fact, developed countries faced the same problem in their early stages of development: small- and medium-sized enterprises in Northern and Western Europe and North America were rarely able to obtain credit from large national or regional financial institutions (Cull et al. 2006).



## 2. BUILDING CLUSTERS

Sonobe and Otsuka (2006) characterize the process of industrial development as taking place in three stages—namely, initiation, quantity expansion, and quality improvement. We can write this intuitively as  $0 \rightarrow 1 \rightarrow N \rightarrow Q$ . The step of  $0 \rightarrow 1$  stands for the initiation phase;  $1 \rightarrow N$  means the stage of quantity expansion; and the quality improvement step can be written as  $N \rightarrow Q$ , where  $N$  and  $Q$  refer to quantity and quality, respectively. This section is organized according to the three stages.

### **$0 \rightarrow 1$**

Most clusters form organically. To illustrate how historical legacy determines cluster formation, the Chinese example can be explored. Many of the clusters in China nowadays originated from township and village enterprises (TVEs) or state-owned enterprises (SOEs). In the 1970s and 1980s, the Chinese constitution did not recognize and protect private ownership. Largely due to the central government's failure to protect property rights, TVEs blossomed (Xu and Zhang 2009). The township and village governments provided local de facto protection for the TVEs. By registering as a TVE, enterprises could circumvent the problem of weak institutions at the time, and they quickly expanded in response to rising market demand, which resulted from the success of rural reform in the 1980s. Some workers who grasped the technology know-how in TVEs or SOEs began to set up workshops at home and sell the same product in the market. After observing the success of those private endeavors, other villages followed suit, triggering the birth of a cluster.

The footwear cluster in Wenzhou is a good example, and we describe its origins in Box 2.1 (Huang, Zhang, and Zhu 2008). Similar stories can be found in the cashmere sweater cluster in Puyuan (Ruan and Zhang 2009) and the children's garment cluster in Zhili (Fleisher et al. 2010).

#### **Box 2.1 The origin of the Wenzhou footwear cluster**

At the beginning of the 1980s, when China began its transition from a command economy to a market economy, footwear products were in seriously short supply. The strong market demand prompted many employees of state-owned or collectively owned footwear factories to set up their own footwear stalls or family workshops and produce whole shoes by themselves. Due to the highly technological requirements for whole-shoe production, most of the early newcomers to the industry were former technicians from the state or collective firms.

A good example of technical diffusion may be seen in the state-owned Dongfanghong Leather Footwear Factory, which gave rise to three major enterprises, namely Jierda Footwear, China Aolun Shoes, and Wenzhou Dashun Footwear Machinery Manufacture, as well as many smaller enterprises, such as the Tailong Footwear Last Factory.

Having the experience of apprenticeship was found to be a major asset in setting up shoemaking businesses. The most prominent example of that is Yu Ashou, the founder of Jierda Footwear. Yu had 16 apprentices, 15 of whom set up their own companies, while the last one became his son-in-law and worked in Jierda Footwear.

Copying and spin-offs further increased footwear production and the rate of technological diffusion. Aokang and Hongqingting are two typical examples of spin-offs. Wang Zhentao and Qian Jinbo first worked as carpenters and later sold shoes together until 1988, when they co-founded a leather shoe factory. In 1995, the factory split into the Aokang Group and the Hongqingting Group, which still exist today. After the split, both groups grew into leading footwear companies. The formation of an industrial cluster is a process of production and technological diffusion through the copying of others. The success of one enterprise often lures others to imitate it, resulting in numerous enterprises being duplicated. As far as Wenzhou's diffusion channels are concerned, this process was accomplished primarily through relatives and friends.

Source: Adapted from Huang, Zhang, and Zhu (2008).

The birth of clusters is primarily due to bottom-up responses to expanding market opportunities. Governments have played little role in initiating such clusters. More often than not, only after noticing the dynamics of the clusters did the local governments start to facilitate their growth.

Most clusters in other countries also have a historical origin. For example, in Santa Catarina, Brazil, clustering is a prominent feature of industrial production. European immigrants started most of the clusters there. The textile cluster was developed by German immigrants who possessed experience in that trade and arrived in the state in the 1880s (Meyer-Stamer 1998).

## **1→N**

Because the barriers to entry are low, clusters often initially enjoy a period of fast growth. However, the explosion in the number of businesses in a limited area quickly creates some bottlenecks, such as insecurity, lack of marketplaces, and inadequate infrastructure. Because an individual enterprise will have trouble addressing large, external problems, collective action is needed. Compared with the limited role of individual firms, local governments and the local business community can play a more important role in leading collective action, as the case studies of a cashmere cluster (Ruan and Zhang 2009) and a potato production cluster (Zhang and Hu 2014) in China illustrate.

Box 2.2 describes the establishment of a logistics center in the Puyuan cashmere cluster in China. As the example shows, the local government in Puyuan responded to infrastructure bottlenecks by building a large logistics center through a private–public partnership.

### **Box 2.2 Building a logistics center in the Puyuan cashmere cluster**

As production grew, so did the volume of transportation into and out of Puyuan. Initially many small, private logistics companies, each operating only one or two routes, served the cluster. It was not economical for each transport company to build separate loading docks and parking lots, meaning that trucks often blocked the streets when loading goods. Some of the companies even hired thugs to fight for the most lucrative routes. In 1995, to reduce chaos and improve efficiency, the local government intervened and organized 27 private logistics and transport companies into a shareholding company with the local government as the largest shareholder. The company invested 40 million yuan to build a logistics business center, a loading dock, a 150,000-square-meter warehouse, and a parking lot. The company has auctioned off 109 routes to more than 140 major Chinese cities to private investors. Although the company would seem to have a natural local monopoly, shipping costs through the Puyuan logistics center have decreased since the company's inception. This may be due to competition from the neighboring Honghe Township's logistics center.

Source: Adapted from Ruan and Zhang (2009).

As clusters evolve, bottlenecks arise successively at later stages. New constraints become binding and require continuous tinkering by governments. Indeed, government interventions should differ according to specific situations and be based on a bottom-up, demand-driven approach. Since clusters exist largely at the local level, it is the local government, rather than the central government, that should play the key role in providing necessary public goods and services, thanks to its informational advantage.

## **N→Q**

As clusters expand, the scale of production increases, depressing prices. Consequently, firms in clusters tend to engage in race-to-the-bottom price competitions. It is a great challenge for an individual firm to upgrade product quality because others in the clusters can easily imitate its new product. Moreover, firms have no incentive to train workers because the trained workers can easily jump ship and go to work for competitors. Local governments can play an active role in shifting the equilibrium of competing for prices

to competing for better quality (Sonobe and Otsuka 2006). For example, providing training to workers at the cluster level and encouraging enterprises to establish brand names are possible ways to improve the innovation capability of the cluster as a whole.

In normal times, building up supporting institutions to encourage innovation is hard because the proposed changes likely will produce losers, who will block the changes. Institutional reforms are more likely to occur after a crisis strikes.

When a crisis emerges, the opportunity costs of producing high-quality goods, namely the profit of producing low-quality goods, fall. Based on surveys in clusters in China's Zhejiang Province, Ruan and Zhang (2010) show that collective action related to quality upgrading is more likely to occur after a crisis. This appears to hold true in other developing countries as well: for example, the ban on imports of surgical instruments from developed countries led to an upgrade in quality in a surgical instruments cluster in Pakistan (Nadvi 1999).

However, crisis is not a sufficient condition for a quality upgrade. Not all clusters can transform crises into opportunities and allow for quality upgrading—failures do happen. An insulated mug cluster in Yongkang, China, arose in 1995 and grew so quickly that the excess supply drove prices below production costs by 1996. The crisis came so quickly that collective action could not be taken promptly, which resulted in the collapse of the whole cluster (Ruan and Zhang 2010). Schmitz (1999) provides another example. In the 1980s, integration into the American footwear value chain allowed an export-oriented leather footwear cluster in Brazil's Sino Valley to improve the quality of its products, its flexibility, and its speed of response. Yet the cluster's exports and profits fell in the 1990s under global competitive pressure since it failed to upgrade in other areas that require coordination between stakeholders. There were two reasons: conflicting interests among entrepreneurial alliances and business associations, and the lack of participation of leading enterprises. This example again highlights how local governments could act as a coordinator to lower transaction costs that arise in complicated networks of businesses within clusters.

The above-cited literature mainly focuses on upgrading processes that occur within localities, especially collaboration between local producers and provision of public goods by governments. External linkages can also be used as a means to spur quality upgrades (Nadvi and Schmitz 1999). When working with global buyers, local producers must follow the often higher quality standards of foreign buyers. The more stringent global standards pose an imperative for local firms to improve their product quality. For instance, Taiwanese contract manufacturers in the electronics industry used the knowledge they had acquired working for their main global buyer for the purpose of supplying other markets. They even took over other lucrative functions such as process development and product design at later stages (Lee and Chen 2000). A similar story is found in the blue jeans industry in Torreon, Mexico, which performed functional upgrading in the 1990s (Bair and Gereffi 2001).

Like crises, a connection with global buyers is not a sufficient condition for quality upgrades. Bazan and Navas-Alemán (2001) show that customized specification prevents Brazilian footwear suppliers of big US buyers from entering national or Latin American markets. Manufacturing to tight specifications for the main customers requires the whole production plant to gear for that specific purpose. Enterprises wishing to participate have to build up highly developed but narrow capabilities. This hinders their ability to appropriately fine-tune product specifications to adapt to local markets.

### 3. BUILDING INDUSTRIAL PARKS

The major difference between building clusters and building industrial parks is the degree of government intervention at the initial stage. Whereas industrial clusters usually form organically without government intervention, industrial parks are initiated by governments to jump-start economic growth in a specific geographic region. Since improvement of the business environment of the country as a whole is neither economically nor politically viable, governments in developing countries often prefer to build industrial parks on a smaller scale. When constructing an industrial park, the government aims to attract investment by offering potential entrants geographically limited benefits of various kinds.

UNIDO (1997) defined an *industrial park*, or the more general term *special economic zone* (SEZ),<sup>5</sup> as “a tract of land developed and subdivided into plots according to a comprehensive plan with provision for roads, transport and public utilities with or without built-up (advance) factories, sometimes with common facilities and sometimes without them.” In addition to hard infrastructure, industrial parks often grant preferential policy and have different institutional arrangements from the rest of the country—such as tax and tariff reductions, looser labor regulations, different sets of laws, and many other practices that provide convenience and lower the costs of doing business.<sup>6</sup> While the policy instruments that governments could use to lure investment are known, there are a few strategies they could follow to increase the chances of success: targeting international firms, targeting grouped businesses, incentivizing first movers, and adopting a step-by-step approach.

#### Targeting International Firms

The high lump-sum costs of investment suggest that firms operating in industrial parks in developing countries are generally large in size. Because domestic markets in developing countries are often in their infancy, they cannot absorb the production of firms in industrial parks. It is therefore more reasonable for industrial parks to target firms that bring in international market orders from abroad and finish the orders in the parks. Doing so has a few advantages. First, firms in the industrial parks can focus on their production without worrying too much about the thin domestic market. Second, many global buyers provide intermediate inputs for their orders and just put out the assembly step to domestic firms. Firms in industrial parks in developing countries are therefore less subject to the supply chain problems inherent in many developing countries. Over time, as domestic markets grow and as firms build their reputation locally, they can gradually expand their domestic market shares and subcontract more tasks to other domestic firms, even outside the industrial parks. In doing so, they generate positive technological spillover to existing firms and contribute to overall economic growth (Greenstone, Hornbeck, and Moretti 2010; Glaeser and Gottlieb 2009).

#### Targeting Grouped Businesses

Given the limited number of multi-establishment firms, the strategy of targeting only fully vertically integrated firms may not always be viable. As industrial production needs upstream and downstream supply chains, it is often hard for a small- or medium-sized firm to survive in an isolated place. As a result, the “go-as-a-group” model has come into being in recent decades: a powerful enterprise or business association takes the initiative to establish an overseas trade center and industrial park, as a means of attracting domestic enterprises to go as a group. The use of the strategy is to maintain the original production connections overseas by investing as a group of upstream and downstream production enterprises and preserving the domestic industrial chain in the host country. Such a strategy has several advantages for enterprises in the group: achieving market internalization of intermediate products, formulating internalization advantages, reducing international market risk, reducing export tariffs, and

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<sup>5</sup> In this chapter the terms are used interchangeably for convenience.

<sup>6</sup> See Aggarwal (2005) for a review of fiscal incentives provided by governments in India, Sri Lanka, and Bangladesh.

optimizing the international investment environment. During trade dispute settlements, the grouped enterprises can negotiate and resolve trade quarrels with better bargaining power. We offer the example of Yue Mei, a Chinese textile and garment company. In 2004, Nigeria banned the import of textile and garment products from China. Yue Mei in response planned to set up a processing plant in Nigeria but soon realized that the incomplete supply chain would make it hard to survive as an isolated business in the foreign business environment. In 2007 Yue Mei invited 15 upstream and downstream enterprises originally from China and invested US\$50 million to set up a textile and garment industrial park in a Nigerian free trade zone.<sup>7</sup> Governments in developing countries might exploit the increasingly popular use of the go-as-a-group strategy by private enterprises and target such groups of foreign businesses.

## **Incentivizing First Movers**

Rodriguez-Clare (2007) and Lin (2011) emphasized the importance of ensuring that place-based development programs are compatible with comparative advantages. Although the principle is clear, there are few clues as to which industry a government should support. Mapping from principle to action is not an easy task for a government. Instead of relying on governments to pick winners, an alternative strategy is to encourage private enterprises to discover a profitable business model. The process of cost structure discovery poses massive positive externality. Once first movers figure out a profitable business opportunity, others can easily imitate it. Therefore, the first movers cannot capture the positive externality. Being aware of that, firms are often reluctant to be first movers, lowering their chances of discovering new business models and resulting in socially less-than-optimal outcomes. It makes economic sense to subsidize the first movers (Hausmann and Rodrik 2003; Lin 2010) by offering them special treatment—such as tax breaks and free land. However, to avoid rent-seeking behavior, there needs to be a stick in the incentive program: it ought to be designed with a predetermined exit strategy, and linked directly to individual company performance or a time window. Whereas both elements of carrot and stick are present behind the success of cluster-based development in East Asia, Latin America has had “too much of the carrot and too little of the stick” in its industrial policies. This could explain the discrepancy of industrial growth between the two (Rodrik 2004).

## **Step-by-Step Approach**

Xing and Zhang (2013) suggest that the successes of place-based policies in China are characterized by a *gradual* approach coupled with an *experimental* mentality. The development of China’s SEZs have followed a step-by-step approach: first came Shekou industrial park in 1979 (only 11 square kilometers), followed by the larger-scale Shenzhen SEZ (328 square kilometers) in 1980, followed by 14 coastal opening-up cities in 1984, and culminating in China’s joining the World Trade Organization in 2001. But building industrial parks (or SEZs) is a new endeavor for many governments, and they are concerned about potential failures and negative spillovers. By starting small, governments can learn whether the idea of the industrial park works in local soil. If it fails, the negative spillover effect is limited to a narrow area. If it succeeds, it will boost governments’ confidence to scale up industrial parks to wider regions. Malaysia, Jamaica, Kuwait, and Jordan have adopted this gradual and experimental approach in testing the impacts of SEZs (Akinci and Crittle 2008). As an extreme case, Honduras in Central America has gradually increased the scale of its SEZs since the 1970s, and the government declared the whole country a “free zone area” in 1998 (Farole and Akinci 2011).

## **Industrial Park Failures**

Despite evidence that confirms the positive impacts of place-based policies in China and other countries, such as Indonesia, Malaysia, Sri Lanka, and South Korea (Jayanthakumaran 2003), such policies have failed in other locales.

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<sup>7</sup> “Yue Mei Group: From Product Export to Industrial Cluster Export” 2009.

The political economy of land poses challenges to Indian's SEZs. Legal restrictions remain and discourage private developers from assembling necessary lands for development. The Indian Zone Authority was not granted autonomy over zone development and approval clearance until 2005. Despite the launch of the 2005 SEZ Act, state governments and public-sector actors retain significant control over land procurements and transactions. Due to the strict legal enforcement, including of land ceiling and land use clauses, private developers need governmental patronage for land acquisition (Seshadri 2012). Even if they succeed, the size of a zone is limited to 5,000 hectares (Mitra 2007). Conflicting interests over land acquisition between citizens and firms operating in industrial parks is another hindrance.<sup>8</sup> Issues of dislocation and rehabilitation, coupled with the fact that India is a democratic country, make the problem even more complicated. Similar to the Indian SEZs, which are managed by public-sector actors, the industrial zones in Egypt are managed by the central government. The failures of Egyptian industrial parks stem from information gaps between the central government and grassroots entrepreneurs. The bureaucratic SEZ system constitutes numerous layers and leads to a mismatch between government and SEZ firms. Worse still, as the zone policies evolve from time to time, SEZ firms must expend unnecessary energy to understand and deal with repetitive policy changes. In contrast, Zeng (2010) attributes the success of China's SEZs to the active and pragmatic facilitation of the local governments and a strong commitment by the state. As demonstrated by Shenzhen, China's first SEZ, fiscal decentralization incentivized better-informed provincial and municipal governments to tailor policies and regulations to local needs, such as providing a sound judicial system, constructing infrastructure, and granting preferential policies.

A number of others failed for less complicated reasons. For example, an export processing zone in Senegal was unable to blossom because of high electricity costs, expensive labor, excessive bureaucracy, and lack of transportation infrastructure (Cling and Letilly 2001). In general, the studies on the failure of industrial parks and SEZs are scant. More research is needed to understand such failures.

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<sup>8</sup> In 2008, with the aim of mass producing the Tata Nano, the world's cheapest car at the time, the Indian vehicle manufacturer Tata Motors established a factory in an SEZ in Singur, West Bengal. The West Bengal government offered compensation to more than 10,000 farmers and acquired 1,000 acres of land for the project, while another 2,000 farmers refused. Their protest ultimately forced Tata Motors to abandon the plant. The protest in Singur is merely one of the many cases reflecting the wider problem in the implementation of place-based policies in India: industrialization needs land but local farmers are not willing to give it up ("Tata Abandons Cheapest Car Plant" 2008).

#### **4. GENERAL REMARKS**

Clusters and industrial parks are location specific. Because of an informational advantage, local governments are in a better position than the central government to identify the bottlenecks that afflict clusters and industrial parks and figure out solutions. As clusters and industrial parks evolve, new bottlenecks emerge, requiring new solutions. This in turn calls for continuous tinkering by local governments. It is important to place local governments and business communities in the driver's seat of local economic growth so that they can watch out for and adjust to bumps in the road. However, it is challenging to strike a balance between autonomy and embeddedness (Rodrik 2004): to reduce corruption and rent-seeking a government as a whole needs to maintain its autonomy with regard to private interests, but to elicit information from the private sector the government should be embedded in a close relationship with it.

China has used fiscal decentralization and evaluation of officials' performance as the major instruments to align local officials' incentives with local economic development (Xu 2011). An essential element of the fiscal decentralization in China is that career competition between regional officials at the same level is based on fiscal performance, which effectively mitigates the problem of incentive misalignment. However, the incentive design used in China may not apply to other countries. Due to differences in institutions, the forms of incentive mechanisms are likely to vary across countries and over time.

In a country with strong state capacity like China, it is not an issue to earmark a certain area as an industrial park and provide it with favorable policies and infrastructure. But in some democratic countries, it may not be legitimate to offer special treatment to certain locations. The industrial park concept does not necessarily transmit well to all developing countries. One should bear in mind the limitations that apply to using industrial parks as a policy instrument to foster industrial development.

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