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## **The practice of industrial policy – Lessons for Africa**

Case studies of decentralized co-ordination in China

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**Abstract:** This paper draws on both successful and failing cases of industrialization in China to analyse the role of local governments in fostering the growth of light manufacturing. The broad spectrum of support types and the intimate knowledge of enterprise conditions by these local governments make their support effective particularly for the business expansion and cluster development. Local government policies toward enterprises are dynamic and tailor to the needs that arise at the various stages of the life cycles of firms, from start-up to growth and maturity. Government assistance has not always involved spending money. The successful outcome is a result of ‘backing the winner’ approach.

**Keywords:** Africa, China, industrial policy, industrialization, decentralized co-ordination

**JEL classification:** H73, L52, L60, O14

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## 1 Introduction

This paper draws on both successful and failing cases of industrialization in China to analyse the nature of co-operation between business and government at the subnational level and to draw policy implications for African countries. The case studies were conducted during a number of field visits to China in 2010 and 2012 and cover the five most common light manufacturing sectors: agribusiness, wood products, leather products, apparel (including apparel accessories), and metal products.<sup>1</sup>

China's spectacular economic performance began in 1978 when Deng Xiaoping put forward the concept of 'letting some people get rich first'. The gradual relaxation of the government's institutional hostility toward the private sector followed quickly. In 1978, the government began issuing permits to allow individual businesses (*ge-ti-hu*) to hire up to seven employees. Subsequent reforms encouraged the growth of larger 'private' firms (with eight or more workers), which started to grow rapidly. Then, private enterprises—including sole proprietorships, partnerships, and limited liability companies—were permitted to set up joint ventures with foreign corporations, thus providing additional opportunities for ambitious entrepreneurs. At the same time, China adopted an export-oriented strategy that encouraged private and overseas investment in labour-intensive manufacturing. The private sector grew at an unprecedented rate beginning in the early 1990s as the government enacted a series of policy changes and legal steps that gradually enhanced the legitimacy of private business. By 2010, China had more than 8.4 million registered private enterprises that employed more than 180 million people (Dinh et al. 2013).

A number of favourable circumstances have contributed to this success. At the global level, steeply rising costs had eroded the cost advantage of earlier global export leaders, creating an opening for Chinese exporters. China possessed an abundance of well-educated workers eager to trade diligent effort for low wages. When this workforce was combined with capital, commercial expertise, and knowledge of technologies and markets from ethnic Chinese entrepreneurs overseas, the result was ripe conditions for light manufactures. Domestic economic conditions also played a role. China's plan system viewed consumer products as costs rather than benefits and therefore channeled resources away from light manufacturing. As a consequence, there was pent-up demand for clothing, shoes, and a wide array of other household and personal items, particularly among households in more prosperous urban areas. The immediate success of China's agrarian reforms enhanced the prospects of light manufacturing by boosting rural incomes and, thus, the demand for consumer products, as well as by expanding the supply of raw materials and non-farm labour. Finally, the main competition for private sector entrants in this growing market for consumer goods was represented by lumbering state-owned firms with little experience in market dealings.

The next section reviews briefly the major constraints that have held back the growth of light manufacturing in Africa and how China has been able to overcome similar constraints over the last 30 years. The subsequent section provides an in-depth analysis of the role of the central government and subnational governments in China in co-operating with enterprises and the private sector, particularly in the development of clusters. This is followed by a detailed account of various types of enterprise support supplied by local governments in China, including the concept of backing winners. The paper concludes with a general discussion on the lessons of the Chinese experience for Africa.

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<sup>1</sup> Data for this paper refer to 2009–2010. See Dinh et al. (2012a) for details.

## 2 How China overcame the binding constraints on light manufacturing

In a previous book, *Light Manufacturing in Africa: Targeted Policies to Enhance Private Investment and Create Jobs*, we show that, to grow the light manufacturing sector, policy makers in Africa need first to identify, prioritize, and remove the most binding constraints in each sector (Dinh et al. 2012a). These constraints vary by country, sector, and firm size. Six binding constraints on African competitiveness in light manufacturing are identified, as follows:

- Availability, cost, and quality of inputs
- Access to industrial land
- Access to finance
- Trade logistics
- Entrepreneurial capabilities, both technical and managerial
- Worker skills

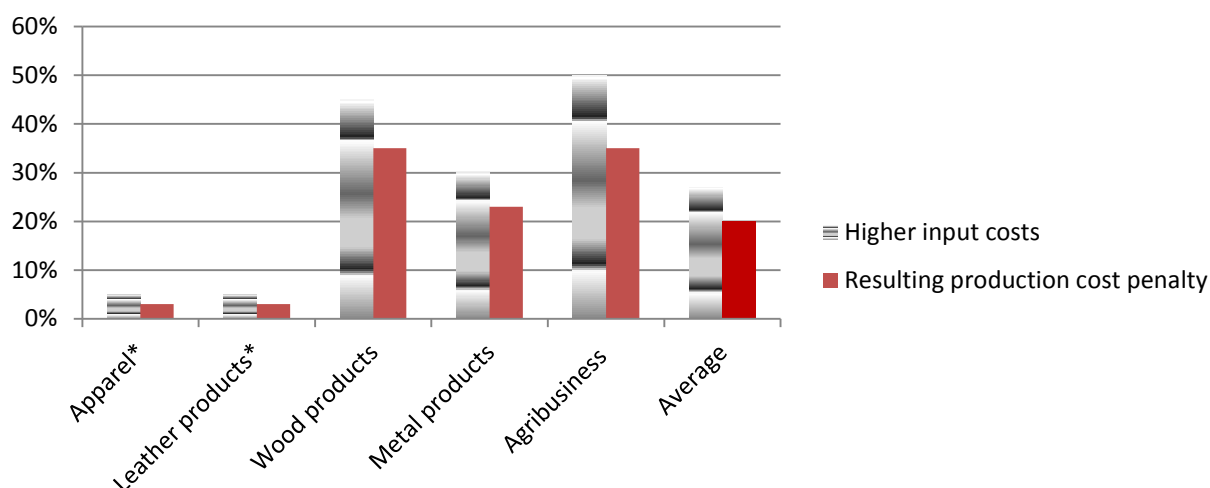
### 2.1 Availability, cost, and quality of inputs

In the African countries we have studied, large and small firms alike identify input supply—including availability, quality, and cost—as a leading obstacle to the development of competitive light manufacturing (Dinh et al. 2012a).

On average across the five subsectors, inputs were more than 25 per cent more expensive in Africa than in China, representing a 20 per cent production cost penalty because inputs account for more than 70 per cent of total production costs (Figure 1). In most cases, higher input costs wipe out Africa’s cheaper labour cost advantage. The main input policy issues are import tariffs, price controls and export bans on agricultural products, barriers to the import and distribution of high-yield seeds, and disease control in the livestock sector.

China faced similar difficulties at the start of its accelerated entry into global markets for labour-intensive manufactured goods. It responded by pursuing a two-track strategy to facilitate access to inputs. First, it developed good trade logistics early on to support imports of the inputs that could not be competitively sourced domestically. Second, it reformed and provided support to key input industries so that these could become competitive. It also transferred large numbers of government-owned enterprises to partial or full private ownership, instituted reforms aimed at commercializing the remaining state enterprises, dismantled many official controls over prices and resource allocation, encouraged foreign direct investment (FDI) for key inputs (such as in machine manufacturers), and developed sustainably managed wood plantations and competitive agricultural sectors. National and, especially, local governments supported the creation of input and output markets through the provision of land and financing (such as in the Yiwu market in Zhejiang Province, which was developed with the initiative and support of local officials) and supplied co-ordination along value chains. China exempted exporters from taxes and duties on imported materials. It also offered information and technical assistance on inputs, technology, and suppliers to small and medium enterprises (SMEs).

Figure 1: Impact of higher input costs on total production costs, Africa relative to China



Source: Dinh et al. (2012a).

## 2.2 Access to industrial land

It is ironic that land is a constraint on most manufacturing firms in land-abundant sub-Saharan Africa (SSA). Because all manufacturing firms need industrial land equipped with utilities and transport links to markets, SSA's huge deficit in industrial land puts land policy at the core of its industrial development agenda. Problems with land acquisition often prevent firms in SSA with 4 or 5 employees from growing into businesses with more than 10–15 employees. To do so, they would need a larger workspace connected to affordable and reliable utilities and reliable transport links to the markets for inputs and outputs. Most small firms are located in the homes of the owners or in small workshops. Connecting to utilities requires large fixed investments that are typically beyond the means of small informal operators. The savings and retained earnings of small business owners are usually insufficient to purchase industrial land to expand the business. If the government attempts to provide factory shells outside cities, the transport costs for hauling raw materials and products are an additional constraint.

China's successful industrial parks provide enterprises with security, good basic infrastructure (roads, energy, water, sewers), streamlined government regulations (through government service centers), and above all, affordable industrial land. They also supply technical training, low-cost standardized factory shells that allow entrepreneurs to plug and play, and free and decent housing for workers next to the plants. By helping small Chinese enterprises grow into medium and large enterprises, the country has also voided the shortage of medium firms—the missing middle—faced by most countries of SSA.

In recent years, Chinese industrial parks have been offering one-stop shops that allow firms located under their jurisdiction to simplify and speed up official registration and regulatory transactions. Western buyers have an appetite for large orders, and China's industrial parks allow the country's firms to scale up rapidly to meet the needs of buyers. Such arrangements reduce search and transactions costs and promote the ready availability of information for buyers and sellers.

## 2.3 Access to finance

Access to credit has been identified as the most binding constraint on small companies in developing countries (Dinh et al. 2012b). But our study of African and Chinese firms has found

that the initial start-up investment among entrepreneurs has been sourced mainly from personal savings or financing supplied by informal networks of family, business colleagues, and friends. The savings are typically accumulated through migrant or other factory work, trading, or family workshops. In the Chinese button and zipper case studies, the initial capital was supplied by friends and family or personal savings. In Jiangxi Province, local entrepreneurs built up savings through migrant work in nearby Guangdong and other coastal provinces during the 1990s, then returned home to set up garment, leather, and shoe-making enterprises. We found few instances of bank credit or of FDI in the start-up phase.

Financial institutions, however, are central in the growth from small to medium firms. In China, once the enterprise has achieved considerable success, start-ups may obtain bank loans to expand production facilities, build new factories, buy machinery or land, or acquire the working capital needed to execute large orders. The most common reason firms fail to gain access to bank loans at an earlier stage of their growth is the lack of collateral. If firms are able to take out loans, factory premises or land can be used as collateral, sometimes combined with a loan guarantee from a friend or from special companies established for this explicit purpose.

The clear implication of China's light manufacturing experience for other developing countries is that help from a financial intermediary is not a necessary precondition for starting an enterprise. However, entry into formal credit markets can make a big difference for businesses that have achieved initial success and aim to enlarge the scale of operations, upgrade equipment and production processes, or both.

## **2.4 Trade logistics**

Poor trade logistics penalize firms that rely on imported inputs and doubly affect exporters, mostly large and medium firms in Africa. On average, they add roughly a 10 per cent production cost penalty across the five subsectors in the three African countries we have studied. Poor trade logistics also cause long and uncertain delays, unacceptable to most global buyers, especially in the time-sensitive apparel industry. As a result, production in most African countries is typically confined to small market niches. The small orders mean higher input costs, lower capacity use, and higher overhead.<sup>2</sup>

Similar to the enterprises in Africa, reliable transport services and streamlined customs clearance are critical for manufacturing firms in Ganzhou, Jiangxi Province. Although located in a landlocked area, Ganzhou has developed an administrative system for dealing with overseas trade, including customs and inspection, foreign exchange, trade facilitation, and port clearance. Goods can be exported directly to foreign markets through integrated railway-sea and truck-sea transport services. The Longnan customs office in Ganzhou collaborates with peers in Guangdong Province to expedite the commodity transfer and customs clearance services between Guangdong, Hong Kong, Jiangxi, and Macao. An agreement with Guangdong customs officials allows enterprises in Ganzhou, located across the provincial border in Jiangxi, to submit customs declarations at the local office, while containers are inspected at coastal customs checkpoints. This means an exporter needs to go through only one declaration and inspection

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<sup>2</sup> Ethiopia exports small volumes of low-value products. The free-on-board (f.o.b.) price of an Ethiopian polo shirt is around US\$3.20, much lower than the US\$5.50 price of an equivalent shirt produced in China. The higher Chinese f.o.b. price results from higher-quality shirts and the premium global buyers put on China's capacity to offer greater choice, bigger volumes, and shorter and more certain deliveries. Tanzania exports polo shirts at an f.o.b. price similar to China's, but these are small-volume specialty products garnering orders of as low as 1,000 pieces per style, not the fairly standard orders of 15,000–60,000 pieces.

process instead of two (in the place of origin and at the departure port), thereby reducing customs clearance for a cargo vehicle from Ganzhou from 10 to 4 hours (Dinh et al. 2013). Customs clearance costs also plunged from Y300 (US\$44.00) per vehicle to about Y2 (US\$0.30).

## **2.5 Entrepreneurial skills**

There is considerable heterogeneity in firm performance in Africa, partly reflecting the entrepreneurial and management skills and partly the lack of competitive pressure in many countries. Inefficient firms are not driven from the market, and entrepreneurs find entry difficult. Large productivity variations within narrowly defined industries arise from multiple factors: the limited dispersion of entrepreneurial and technical skills, market segmentation arising from policy interventions (for example, tariffs or entry restrictions) or geography (for example, poor roads), and limited competitive pressure.

The first generation of Chinese entrepreneurs in the post-reform era generally established new businesses without the benefit of formal training in business management. They acquired entrepreneurial skills through imitation and by learning from failures. Entrepreneurs in the light manufacturing sector in Jiangxi and Zhejiang provinces do not choose their industries and products randomly. They acquire knowledge and skills from three sources: (1) prior work experience in the production of specific production items, as well as interactions with friends and relatives involved in this production; (2) trading the products that they eventually manufacture; and (3) networks and contacts established through former jobs in state-owned enterprises in the same manufacturing sector.

Many Chinese firms have been able to gain the managerial skills required for expansion by forming partnerships with companies in Hong Kong or Taiwan or with overseas Chinese in other Southeast Asian countries. These investors provide capital and access to new technologies and managerial and technical skills. It is the central government that creates the environment conducive to these investors, while local governments provide the incentives that attract them.

## **2.6 Worker skills**

While worker skills are often mentioned as a constraint on manufacturing growth in Africa, our study indicates that, with the exception of the manufacture of wood products, the efficiency of African workers overlaps the range observed in China in simple labour-intensive products. The numbers suggest that low-level skills are sufficient for jobs in, for instance, computer management technology operations in the apparel industry. Africa's potential can also be inferred by the significant positive impact that targeted technical assistance programmes have had on both efficiency and quality (as in the Ethiopian shoe industry; see Dinh et al. 2012a). So, SSA can be competitive in light industries that do not require semiskilled workers because there is a plentiful supply of trainable unskilled workers.

To graduate to more complex production such as the manufacture of dress shirts or trousers in the apparel industry, manual or artisanal skills are important. If SSA wants to upgrade its industries to more complex products, there is no shortcut to a more vocationally trained labour force. Our qualitative interviews and factory visits in China show that assembly line operations involving weaving machines for the production of sweaters, sports shoes, and toys or even for labeling and packaging require more technical skills and literate workers. Comparative advantage is dynamic: mastering the production of the simplest light manufactures such as T-shirts can open the door to a comparative advantage in more sophisticated light manufactures, but not without a corresponding upgrade in industry skills. Because skills upgrading is a public good, there is a clear role for government policy.

Local governments in China pay attention to the labour needs of enterprises, particularly in the light of rising labour costs, as specific examples below demonstrate. Thus, in the case of the Dieshiqiao Home Textiles Market in Jiangsu Province, the local government helped Dieshiqiao firms obtain unskilled and skilled workers by establishing a labour market through which enterprises could recruit workers. The local labour authority has partnered with Anhui and Henan—provinces that provide about 70 per cent of the incoming domestic migrants—to recruit more workers. Similarly, in the case of Yongkang’s hardware cluster, the local government has set up 36 recruitment centers in ten cities and provinces to reach migrant workers in other regions. To meet the need for skilled workers, the municipal government has built 28 training centers for local villagers. In co-operation with local vocational schools, these centers have processed nearly 90,000 trainees, of whom 36,000 passed the training exams and obtained employment in local hardware firms.

### **3 The nature of government-private partnership in China**

In China, the public sector has overcome its initial hostility, and, despite remaining obstacles associated with property rights, access to finance, rule of law, and so on, it has demonstrated a growing capacity to support and co-operate with private business, especially at the local level and in sectors such as light industry that do not occupy a prominent position in official development plans.

In Africa, by contrast, there is often an adversarial relationship between the public and private sectors. Public entities view private firms as a source of rents or as vicious, corrupt profit-seekers bent on exploiting the nation’s resources. Private firms see the public sector as a source of rent seeking or troublemaking. Bridging this gap will take time.

Government support in China includes policies across all levels of government, and these policies may vary from region to region and from locality to locality. In the early years of industrial development, the Chinese government built a reasonable track record in providing macroeconomic stability and gradually dismantled elements of the former planned economy that had prevented the establishment of openly private enterprises and hampered the expansion of SMEs in the public sector as well.

The remainder of this section traces out the respective roles of the central government and of subnational governments and their co-ordination in the development of economic activities in clusters. A cluster strategy can help overcome the constraints on the access to inputs, industrial land, finance, trade logistics, entrepreneurial skills, and worker skills that affect business and industrial development in low-income economies. Once a few firms in a specific industry have formed a cluster in a local community, the entry costs for followers are lower because of positive external economies (Marshall 1920; Fujita et al. 1999). The agglomeration of similar firms creates a critical level of demand for specialized inputs and services. Clusters mature with the formation of upstream suppliers and downstream service providers in the local community. The deep division of labour among firms in the local community enables cluster firms to respond flexibly to market changes at low cost. Because local suppliers are available, cluster firms can subcontract urgent orders to other local firms without previous additional investment for expansion. One potential drawback is that the enormous convenience of doing business in clusters makes some firms reluctant to relocate, despite increasing labour and land costs.

Consistent with the fiscal literature on China, we discuss China’s government at five levels: (1) the center, (2) provinces, (3) prefectures, (4) counties, and (5) townships. In practice, there is also another level, villages, which are under townships. Because the size of provinces is large, we



will make a distinction between the central government, provincial governments, and the remaining government levels, which we designate simply as local governments.

### 3.1 The role of the central government

The strong commitment of the central government to a market economy was critical to the formation of the first generation of private firms in China, while the fiscal reforms beginning in 1994 created strong incentives for local governments to foster clusters.

In the transition from a central plan system to a market economy, local entrepreneurship can be too risky if it does not have organizational legitimacy. To invest, entrepreneurs needed a guarantee that the central government would permit private enterprises to develop. Starting in the mid-1980s with the dual-track price system, private and family enterprises grew steadily as entrepreneurs gained confidence that their activities would not be quashed (Wu and Zhao 1987). In the towns and villages where most light manufacturing clusters in Guangdong and Zhejiang provinces developed, the number of township and village enterprises increased from 12 million to 23 million from the mid-1980s to the mid-1990s. Most of these were private household firms. Since the mid-1990s, with the maturation of the market economy, many collective township and village enterprises have been privatized.

While the transition to a market economy permitted private enterprises to form, more was needed to encourage cluster growth. To incentivize local governments to promote clusters and stem growing fiscal deficits, the central government negotiated a tax-sharing system that split the tax revenue from enterprise income: 60 per cent now went to the central government, and 40 per cent to local governments. Local governments could thus benefit directly from the development of nearby industrial clusters. Before 1994, all taxes had been channeled to the central government, and local government expenditures had been the responsibility of the central government. By establishing a tax-sharing system, the 1994 reform introduced a hard budget constraint on local governments in that they were now financially responsible to provide most public services within their jurisdictions. However, the reform also provided a legitimate means for local governments to raise revenue by promoting local industries, which had to pay land and income taxes, and local governments thus began aggressively championing local businesses. The fiscal reform, by encouraging such growth, also led to a substantial increase in central government revenue.

The fiscal reforms helped foster the central government's commitment to the security of economic rights and the preservation of markets. Qian and Weingast (1997) note that, in effect, the central government gave up information and authority in exchange for more efficiency from local governments and therefore raised the credibility of commitment. To encourage local governments to promote cluster development, the central government gradually implemented a new performance evaluation system for local government officials that was consistent with the country's transition to a market economy. Besides political loyalty, local GDP is a decisive component of the system.<sup>3</sup> Promotions among local government officials are greatly dependent on whether regional economic growth can catch up to or outpace the economic development of other areas in China. The central government established this performance evaluation system to enhance its political legitimacy through economic growth. Applying a probit model to data from

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<sup>3</sup> In recent years, the GDP-centered government performance evaluation system has been widely criticized for promoting environmental degradation and income inequality. The central government has now articulated a philosophy of scientific development intended to give added weight to environmental protection and distributional equity in economic policy-making.

1979–95, Li and Zhou (2005) provide evidence that provincial governments are likely to be promoted or terminated based on the economic performance of their provinces. The new system set in motion ferocious competition among local governments in nurturing entrepreneurship and attracting investment. By the early 1990s, local governments were acting as if they were professional corporations, providing financial and political support to enterprises (Oi 1992).

### **3.2 Provincial governments**

Compared with the central government, provincial governments play a more active and specific role in regional cluster development. They affect the formation and upgrading of clusters in two main ways: land allocation and cluster development planning.

Because China has little cultivable land relative to the large size of the population, the central government strictly controls the conversion of land from agricultural to industrial use. Each province is notified of an annual quota of industrially convertible land that it may allocate among various industries. In the highly industrialized coastal areas, such as Guangdong and Zhejiang provinces, land is the scarcest production factor because there is almost no idle land for industrial use. In recent years, there has been fierce competition for land among industries. Low-technology industries and industries that generate fewer jobs are at a disadvantage in this competition, and the land allocation decisions of provincial governments have become tools of an industrial policy that tends to favour high-end clusters over less competitive ones.

Provincial governments use their market information and networks to identify exemplary clusters and design and implement cluster upgrading and development plans to support them. In Guangdong and Zhejiang, the provincial governments have established departments dedicated to such upgrading. Both governments have initiated projects to identify innovative clusters and provide financial support. They have also designed cluster development plans to promote collaboration and mutual learning among clusters, to facilitate the construction of joint research centers by universities and cluster firms, and to encourage cluster firms to explore international markets. In 2010, the Guangdong provincial government initiated a large planning project called ‘one specialized town cluster, one upgrading strategy’ to encourage each cluster, whatever its stage of development, to plan for structural transformation after the recent global economic crisis (Dinh et al. 2013).

### **3.3 Local governments**

China’s fiscal reform of 1994 and the performance evaluation system based on growth in GDP gave local governments a strong incentive to promote local industries. These incentives encouraged local governments to become more involved in the development of clusters. Thus, while all levels of government now benefit from the growth of clusters, no single level of government totally controls cluster development. The Chinese style of federalism has created a political basis for the success of cluster-based economic development (Montinola et al. 1995).

China’s experience also illustrates the potential of local governments to support and contribute actively to industrial development. In some countries, the central government plans and develops strategic industries by mobilizing and allocating resources. These efforts to pick winners often fail. Local governments have fewer options. They cannot change the macroeconomic environment or build national monopolies, and they lack many of the resources available to the central administration for building industries. As a result, local governments have generally supported profitable firms that are already in business in local communities.

China's experience in the development of clusters substantiates the argument that the government's role is to nurture and support existing cluster firms rather than trying to create clusters from scratch. Local governments (prefectures, counties, townships, and villages) are directly connected to clusters, which generally account for most of the economic activity in a village or town. By focusing on individual clusters and communicating frequently with local entrepreneurs, local governments can devise policies clearly targeting specific industries. They can take several measures to foster cluster development.

#### *Nurturing clusters from an existing industrial base*

Successful clusters are rarely built from scratch (Braunerhjelm and Feldman 2006). In China, entrepreneurs build clusters; governments nurture them, supporting the most profitable local industries. This industrial base can consist of private firms or state enterprises, such as the Chengdu shoe-making industry (below). Potential entrepreneurs learn from these enterprises and form spin-offs. Local government officials in Haining explained how and why they picked the warp knitting industry to support as a strategic industry:

At the beginning, we here had several small warp knitting firms. After some analysis, we felt these products had a good market potential. ... We had four or five firms. From this, we discussed with these entrepreneurs and decided to develop [the industry]. ... Among the four or five firms, there is one called Zhejiang Jinda Materials Co., Ltd., which trained a lot of professionals in the local warp knitting industry, from front-line workers to technicians to middle-level managers. After acquiring some skills, these professionals started their own businesses (2012 interview).

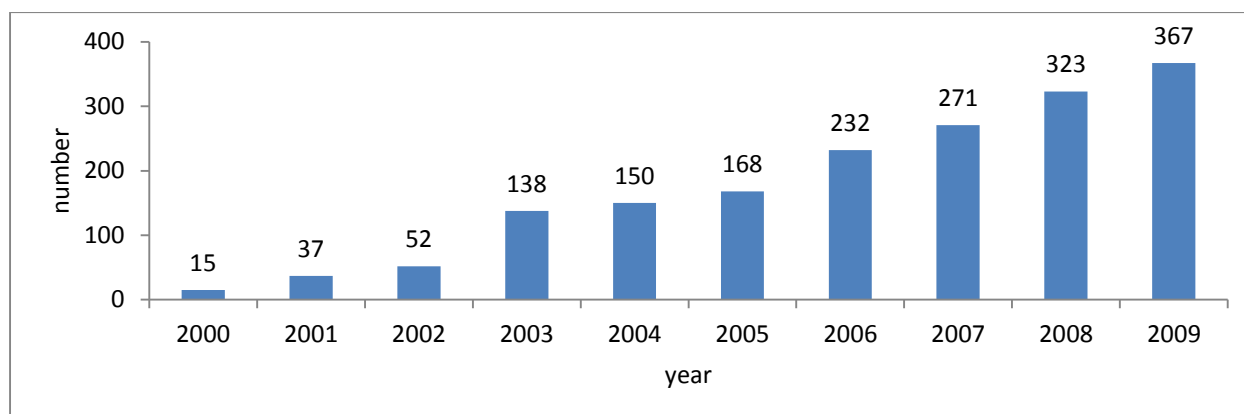
With the support of local government, the Haining industry developed into the world's largest warp knitting center, with 360 firms and 2009 sales revenue of Y15 billion (US\$2.2 billion).

Some local governments have encouraged trading or sales agents to move into manufacturing to develop clusters. For example, the Nanhai metal cluster evolved from a group of scrap metal recycling and trading businesspeople in Guangzhou, Guangdong Province.

#### *Building industrial parks*

Since most clusters develop organically, cluster firms are usually scattered across many villages or small towns. Rural areas are a good place for start-ups because the cost of land is low, but they are not such a good place to grow because there is no industrial infrastructure. In China, if local governments target a specific industry, they build industrial parks with good infrastructure and concentrate firms within the parks. Firms in these parks benefit from favourable policies on land acquisition, taxes, and duty drawbacks. Local governments may not be selective in the early stages of industrial parks, but, as more firms relocate into the industrial parks, local governments become more selective, and many parks are gradually dominated by firms in specific industries, thus becoming clusters. Clusters often expand rapidly after the construction of the industrial parks. In 2000, for example, the local government in Haining chose warp knitting as a strategic sector for local development and built an industrial park with good infrastructure expressly to cultivate a warp knitting cluster. Only 15 warp knitting firms moved in when the park opened. As the number of firms grew from 15 in 2000 to 367 in 2009, the warp knitting industry flourished (Figure 2). A similar process occurred in the Chengdu shoe-making cluster and the Yangzhou toothbrush cluster (Dinh et al. 2013).

Figure 2: Warp knitting firms, Haining Industrial Park, Zhejiang Province, China, 2000–09



Source: Dinh et al. (2013).

### *Creating special platforms for specific industries*

As firms develop from family workshops to modern factories, they need not only hard infrastructure, but also soft infrastructure such as new systems of organizational management, technological research and development (R&D), and market exploration. Local governments often set up special platforms for specific industries. There are many examples of creative collaboration between the public and private sectors in this endeavour. In the Haining warp knitting cluster, the local government created professional platforms in science and technology, social services, cultural promotion, international communications, training, trading, finance, and business consulting. Thus, the park co-operates with Shanghai Jiaotong University to provide high-level management courses for local professional executives and has also built an experimental factory to offer training programmes for front-line workers and technicians. Some platform services are provided by professional companies set up by local governments. In Haining, the administrative committee of the Warp Knitting Industrial Park established a firm specializing in financial guarantees (*danbao*) to help firms obtain bank loans.

## **4 Tailoring government support to the business life cycle and backing winners**

Local government policies toward enterprises are dynamic and tailored to the needs that arise at the various stages of the life cycles of firms, from start-up to growth and maturity. A successful cluster policy focuses less on bringing firms together and more on helping firms overcome barriers to growth. In the beginning, local governments tend to provide start-up funding and technology for local enterprises. As enterprises grow, cluster policies focus on developing supply chains in the local communities, and the governments offer loan guarantee services to help firms obtain loans for expansion. As enterprises enter a steady state of growth, local governments supply over-the-counter services. Finally, when firms reach a mature stage, local governments encourage cluster firms to go public, build their own brands, and transfer labour-intensive manufacturing activities elsewhere. In this mature stage, it may be possible to create new clusters in other developing areas or in other developing countries. While government support has been wide-ranging, including fiscal incentives, infrastructure development, and advisory support on upgrading, assistance has not always involved heavy spending.

#### **4.1 Start-up phase**

In light manufacturing, government support for domestic start-ups is typically small and may amount to little more than providing infrastructure in the same way other countries have done. In some cases, for example in Guangdong Province, some seed or start-up funding has been supplied to local entrepreneurs. Among joint enterprises receiving FDI, official support takes the form of across-the-board policy measures established by the central government such as rebates on customs duties, undervalued exchange rates, income tax exemptions, and so on. In this respect, government support in China hardly differs from that of many other developing countries. What seems unusual is the way in which China's policy structures provide both central government officials and local officials with strong pro-growth incentives that make them eager to see businesses succeed because private sector success may elevate their own financial prospects and career trajectories. In many other developing countries, government officials consider the private sector an opportunity to share the wealth of the community, while the private sector looks at government officials as robbers.

#### **4.2 Growth phase**

In the growth phase and the maturity phase (see below), government support in China is substantial and provides clear evidence that the government's industrial strategy is designed not so much to pick winners as to back winners. This is a crucial difference with the strategy typically adopted in other countries. The range of enterprise support is wide and is best illustrated by the three examples of pen manufactures in Wenhou, home textiles market in Dieshiqiao, and footwear in Chengdu (below).

Other areas of intervention during the growth phase include the following: (1) creating knowledge spillovers through the establishment of enterprise associations and chambers of commerce to strengthen local communication among enterprises and identify shortcomings in zone administration, (2) improving managerial and worker skills, (3) reducing the bureaucratic burden, (4) expediting payments, (5) reinforcing market signals, and (5) providing services such as quality control.

#### **4.3 Maturity phase**

Government support during the maturity phase tends to be geared toward R&D, networking, marketing, assistance through trading companies, and completing the value chain through investment in upstream and downstream activities. Chinese officials, acting as matchmakers, connect firms with research agencies and consultants, thereby reducing the costs of access to information.

In matching producers with research facilities, the government creates co-operative relationships that strengthen both sides. Bringing actors together reduces transaction costs, resolves key constraints, and saves firms time and money. Researchers thus gain inside access to information on how firms operate. In another kind of match-making, industrial park authorities in the Dieshiqiao home textile cluster in Jiangsu Province links firms with banks to improve the access of firms to finance.

#### **4.4 Failure**

Along with instances of successful official intervention, we find episodes of failure. The automobile project in the Yinchuan economic development zone in Ningxia Province failed mainly because local governments tried to develop a sophisticated industry for which they do not

have any comparative advantage. The result demonstrates that a viable cluster cannot be built from above, but must rest on private initiatives that can stand up to market discipline. This reinforces our recommendation that government industrial policy should not aim at picking winners, but rather at backing winners, a lesson that also emerges from the failure of many state-owned enterprises in Africa (Dinh et al. 2013). Policies that provide preferential treatment for certain investors without taking account of comparative advantage may encourage moral hazard and damage the local economy. This illustrates the downside of policies linking the advancement of local administrators to growth in local GDP and inflows of investment: if there is no regard for the market or for local comparative advantage, such a policy may not represent an incentive to succeed, but a temptation to take risks.

#### 4.5 An illustration of government support in China

Up to this point, our discussion on the decentralization of government support in China has been carried out on an analytical basis, breaking down this support, first, at the level of constraints to firms and, then, at different levels of government in the development of clusters. While this approach is useful in understanding the distinct effects of government support, it does not reveal the full richness of local government support in each locality. In the following paragraphs, we discuss a complete menu of government support in the case of the manufacture of three products at three specific locations: pen manufacturers in Wenzhou, Zhejiang Province; Dieshiqiao home textiles in Haimen, Jiangsu Province;<sup>4</sup> and footwear in Wuhou District, downtown Chengdu, Sichuan Province. While the enterprise support supplied by local governments in China is varied, it can be classified into three broad categories: (1) facilitating production factors, including land subsidies, credit, and training programmes to develop worker skills; (2) creating externalities through industrial parks or cluster development; and (3) helping to establish upstream and downstream activities to complete the value chain of enterprises.

*Pen manufacturers in Wenzhou, Zhejiang Province:* To help pen manufacturers cope with mounting labour shortages and rising labour costs, the local labour authority, in a step co-ordinated by the Wenzhou Pen Manufacturers Association, joined with universities in establishing a training center in 2007 to attract, train, and certify pen professionals. The association issued policies on professional titles, salaries, and social security to provide incentives for technical talent. The center holds regular training sessions for senior and mid-level employees with specific skills. The target has been to raise the share of skilled workers to a quarter of the sector's workforce. Aihao Pen Manufacturing Company Ltd. in Wenzhou is currently the world's largest producer of roller ball pens.

The Longwan District Authority has also built a pen manufacturing center, China's Pen Capital. In the first phase, 45 pen firms, including Aihao, moved in. Pen firms receive government support in marketing and technology. Companies that invest in building new workshops, renovating old ones, or setting up new production lines benefit from tax breaks on the investments. To reduce the cost of pen tip and ink imports, the Wenzhou Pen Manufacturers Association has arranged for Wenzhou University to set up an R&D lab to solve key technological bottlenecks in pen tips, ink, ball points, and automatic assembly. The local government and Wenzhou University jointly invested Y20 million (US\$2.4 million) to build the lab. These investments have made it easier and cheaper to obtain inputs domestically. The local

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<sup>4</sup> This important textile cluster is centered on the former village of Dieshiqiao, which is now part of Haimen, a county-level city in Jiangsu Province. The Dieshiqiao cluster specializes in the manufacture, sale, and distribution of home textiles, a category that includes bed linens, curtains, quilts, cushions, and plush toys.

government has also invested in building commodity markets that reach across the region and the country and that help match emerging enterprises with buyers.

*The home textiles market in Dieshiqiao, Haimen County, Jiangsu Province* has benefitted from the local government support, which has extended Haimen's traditional reputation as an educational center. An unusual feature is the use by the local government of financial incentives, tax benefits, and special provisions for the education and health care of dependents so as to attract businesspeople and technicians to Haimen. Haimen has three vocational universities and two vocational high schools; its technical schools and continuing education facilities provide training to over 5,000 workers each year. The local government has also implemented specific measures to support the home textiles sector. In Dieshiqiao, the local authorities adopted an active supporting role as early as 1982 when they established a market service team to supervise and encourage the nascent Dieshiqiao marketplace for home textiles. Beginning in 1983, home textiles became a focus of the Dieshiqiao government's agenda, resulting in the introduction of policies and preferential incentives affecting land, taxation, industry, and commerce in ways that benefitted household producers and eventually led to the creation of the Haimen Industrial Park. The government has encouraged local firms to improve product quality and enter new markets. In 1994, for example, it conducted a training course on the export business for 40 local embroidery firms with the objective of upgrading their technology and smoothing their entry into the international export market.

Recognizing the problem of the chronic shortage of capital among small-scale entrepreneurs, local officials have tried to assist by establishing a financing platform. The government serves as an intermediary between banks and enterprises after evaluating companies based on sales volume, market share, and tax contribution. The park authority actively promotes co-operation between banks and financial groups to help enterprises expand their financial channels. It has set up a microfinance agency in the park that provides intermediary financial services for enterprises. The microfinance agency avoids guarantees to ensure that companies remain competitive. In 2010, Haimen City transformed the Dieshiqiao market into a limited liability company. This model of public-private collaboration has mobilized capital from multiple sources and upgraded the management of the market.

Once the scale of activity expanded beyond the capacity of local labour resources, the local government began helping Dieshiqiao firms obtain unskilled and skilled workers by establishing a labour market through which enterprises can recruit workers. The local labour authority has partnered with Anhui and Henan, provinces that provide about 70 per cent of the incoming domestic migrants, to recruit more workers. Local labour costs have risen steeply in recent years: the average monthly wage for assembly line workers had risen to Y3,000–Y4,000 (US\$475–US\$634) by 2012, up more than 20 per cent from 2011 and much higher than the nationwide average for similar work. This illustrates the vulnerability of labour-intensive sectors such as home textiles to offshore competition for export and even for domestic sales.

Through partnerships between the trade association and institutions of higher learning, the local government has sought to attract professional talent, offering favourable arrangements for housing and business facilities. By 2010, specialized design and R&D teams had been established in the region. To help embroidery businesses boost production, the town government co-operated with vocational schools to hold annual training classes on corporation management, long-term development, and brand management. Professional consultancy is also offered in R&D and technological innovation. In addition, the local adult education center conducts annual technical training courses.

The enhancement of innovation through R&D has been a key strategy of the local government. High-technology R&D projects or technology upgrading programmes qualify for subsidies. The local government invests only in public R&D platforms rather than specific R&D projects. To encourage the growth of advanced home textile R&D efforts, the industrial park earmarked 20,000 square metres for a new science and technology innovation park in 2011. Firms in the innovation park enjoy preferential policies, such as free rent and utilities.

The local government provides additional services from several interrelated platforms, as follows:

- Protecting intellectual property rights: in 2002, a local agency was established to oversee patent registration and copyright protection. By 2009, the office had registered patents for 6,414 pattern designs and handled 685 copyright infringement complaints. Patent applications have increased more than 10 per cent a year. In 2008, the World Intellectual Property Organization named the Dieshiqiao home textile cluster a demonstration case of copyright protection and honored it with a Gold Award for Copyright Initiative.
- Quality testing: in 2005, the Home Textile Subcenter of the Jiangsu Textile Product Quality Supervision, Inspection, and Testing Center was established and certified as a national laboratory. Its eight inspectors, equipped with more than 100 advanced testing machines, conduct some 2,000 inspections each year on request. The center has enhanced the quality of Dieshiqiao home textile products and improved their access to domestic and international markets.
- Information technology and exchange: in April 2010, a panel of experts from the China Academy of Engineering gave a green light to the Dieshiqiao home textile index compilation scheme. The index will become a barometre for the entire home textile industry. Dieshiqiao has also constructed an e-government network in the industrial park, an e-commerce network, and a logistics information system.

*Footwear in Wuhou Industrial Park, downtown Chengdu, Sichuan Province:* home to one of China's largest footwear clusters, the Wuhou District invested Y400 million (US\$53 million) in 2007 to establish the Chengdu Wuhou Industrial Park Investment and Development Company Ltd., which functions as a large corporatized financing platform. Through fiscal funding and bank loans, the company raised Y2.3 billion (US\$302 million) in its first year, securing the funds for future development. The park's management committee promotes investment, supervises investment projects, and collects taxes. It also raises funds, manages land, and builds infrastructure. The Wuhou Industrial Park has effectively enlarged the industry's capacity to raise funds and provide specialized services. In addition to the 3.8 square kilometre Shoe Center Industrial Park in Wuhou District, production bases for shoe-making have also been built in Chongzhou and Jintang counties. Financed through a government grant, these specially allocated areas offer cheap land and discounted fees for shoe-making firms. Firms receive compensation for relocating from other areas into the district's facilities. Meanwhile, when the enterprises transfer, the park administration credits their relevant tax payments to the authorities in their previous homes. An incubation area supports SMEs. Plants in the incubation area can be bought or leased, a benefit for these capital-constrained firms. To speed up government approval, the park administration has established a one-stop shop that brings together all the individual departments to decide on an investment application on the spot. The park administration offers preferential taxing, financing, and screening for enterprises moving into the zone. Large investments have been made in infrastructure, thereby helping many family workshops modernize.



In 2005, to cultivate local brands, Wuhou District launched the construction of the Brand Enterprises Base of the Western Shoe Center of China Industrial Park to establish an industrial platform for shoe materials selection, shoe buying and trade, R&D, and international logistics for women's shoes. It used 10.5 hectares of land inside the park to build facilities, including an international trade center, a shoe materials center, a logistics supermarket, and a shoe techniques and services center. The Brand Enterprises Base attracts top brands and cultivates local brand-name enterprises. At 4,200 square metres, the international trade center is one of the largest in China for shoe products. The center provides the services of purchasing agents and commission agents and offers assistance in international logistics, as well as training programmes for professional and management personnel. All these functions enable face-to-face contact between merchants and manufacturers, lowering costs and maximizing profits.

To expand business further, the Wuhou government sent delegations to the leading footwear-producing areas of Guangzhou, Quanzhou, and Wenzhou to learn from their experience. Entrepreneurs in Wuhou realized that the gap between the local shoe industry and the coastal shoe industry derives mainly from the scale of production and branding. The Wuhou government decided to offer incentives to encourage the production of brand-name products. In 2004, it promulgated guidelines to encourage private firms to engage in R&D, brand-name production, and export. It set up a competition for the title of 'Famous Brands' at the municipal, provincial, and national levels, with respective rewards of Y30,000 (US\$3,625), Y50,000 (US\$6,041), and Y600,000 (US\$72,492).

After the global financial crisis of 2008–09 led to a slump in international demand, Chengdu launched the Wuhou Direct Sales Mall, the Chinese Women's Shoe Center Top Brands Chain Stores, and the National Tour for Chengdu-Produced Women's Shoes to open up more avenues for domestic sales. Toward the end of 2009, China's first transregional trade market was established. Shoe producers in Chengdu no longer have to rely on original equipment manufacturers, but can process sales directly through stable channels.<sup>5</sup>

The government has helped develop Chengdu into an industrial park through establishment of a complete supply chain that spans backward and forward links, from upstream shoe-making machinery and spare parts, leather and fabric, heels, soles, accessories, and other auxiliary materials to the downstream manufacturing and distribution of shoes, as well as design and R&D, logistics, and other services. Chengdu also has a raw materials market, as well as 160 logistics corporations, 10 shoe-making apprentice training schools, around 300 registered shoe trademarks, and nearly 100,000 employees. Chengdu's shoe firms have a staggering production capacity: 100 million pairs of shoes a year, which are sold in 120 countries and account for 10 per cent of China's footwear industry and 7 per cent of the world industry.

## **5 The key ingredients in China's success**

Modern China started out as a socialist country in which all means of production, including land and capital, belonged to the state. This strong role has provided the government with a level of power not available in other countries. The large size of the country also necessitates

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<sup>5</sup> An original equipment manufacturer is a firm that manufactures products or components purchased by another company and retailed under the purchasing company's brand name. The upgrading process in China has involved enterprises that have progressed from original equipment manufacturers to original design manufacturers and to original brand manufacturers.

decentralized co-ordination. Nonetheless, there are important lessons to be drawn in Africa from the Chinese experience.

First, intense domestic competition among firms and regions has boosted the country's products to their current favourable position. The competition has emerged among producers for both domestic and export markets. Competition among the regions hardens the budget constraints of local governments and changes the incentives of local politicians, thereby helping advance the market (Qian and Weingast 1997). Some enterprises started by forming joint ventures supported by FDI—in the Pearl River Delta, for example—and producing high-quality goods for export. Only when domestic employment had increased and consumers were earning higher incomes did domestic demand rise sufficiently so that these firms turned to the domestic market. Now, the domestic demand for high-quality goods has expanded, and all firms are trying to gain larger market share. Meanwhile, other firms started small and catered only to the domestic market (for example, in Jiangxi and Zhejiang provinces). Only after they had reached a certain scale did these firms expand into export markets. The Yangtze River Delta has myriad examples of SMEs that followed one or the other path.

Manufacturers in Jiangxi Province and in Zhejiang Province report two sources of competition: fellow producers within the province and producers in neighbouring coastal areas. Inland provinces such as Jiangxi tend to be more competitive in terms of labour costs, while the cost of raw materials is often higher, supply chains are less mature, and technological and productive and managerial capacities are weaker. In general, the inland provinces compete at the low end, and producers closer to the coast compete at the more-sophisticated higher end of the product spectrum.

The central government has fostered nationwide competition by establishing awards and certifications that carry substantial monetary and reputational benefits. This is the positive role that competition plays in enhancing group identification (Stiglitz 1992). Japan and Korea have followed a similar path, but China's steep reduction in the barriers to both overseas imports and FDI has elevated the intensity of competition in domestic product markets far beyond what we may observe in these neighbouring economies. China's local governments help firms develop competitive strength and pursue the awards and certifications, which can enlarge local budgets and enhance the reputation and career paths of local officials. For example, to qualify for preferential tax rebates, high-technology firms must have a certificate confirming their status. Qipai Motorcycle in the Jiangmen development zone in Guangdong Province received local government assistance to obtain its certificate (Dinh et al. 2013). Other awards are bestowed if enterprises or zones meet enhanced environmental standards, allowing the winning firms and zones to boast of their environmental reputations, compete for regional and national awards, and attract investment.

Second, China has benefitted from macrostability in terms of domestic fiscal and monetary policies, exchange rate policies, and policies on import tariffs. This macrostability has been supported by political stability, which many other developing countries lack, including countries in Africa.

Third, industrial policy has not been a singular prescriptive policy applied in all districts and provinces. Instead, various policy approaches have been adopted depending on the local context and the particular stage of development. For example, the government does not promote SMEs at the expense of large enterprises. The SMEs provide jobs, while the large enterprises provide subcontracting work for the SMEs. Similarly, the government does not support new firms except through the provision of land and factory shells, but, once a firm is established and is doing well, the government is available to offer many services. This might include streamlined administrative

procedures, support for technological upgrading, and access to market information through networking. The goal is to guide the firm and the industry to become nationally competitive. The government has thus played a critical role in facilitating the creation of input and output markets around which industrial value chains and clusters have evolved.

Fourth, in the last decade, because of the rapid development of clusters and industrial parks and because of reliance on a combination of skilled labour and a large domestic market to integrate value chains, China has become a world-class competitor in light manufacturing across an enormous range of products. The Dieshiqiao and the Haining economic zones illustrate how China has moved from assembly industries to upstream and downstream activities covering the whole supply chain, and the huge size of the domestic market has certainly helped China attain this unique competitiveness position by facilitating competition.

While rising wages remain an issue in China, the constant upgrading of Chinese technology, combined with the supply of labour from the interior regions, will continue to keep most mid-level and high-end Chinese industries at home, while low-end manufacturing may begin moving to neighbouring low-income countries and to Africa.

There is an excellent opportunity for these other countries to begin the industrialization process. In a way, the recent success of the Chinese industry has completely redefined the production standard of developing countries and, in view of globalization, has raised the entry barriers facing many mid-level and high-end industries in Africa, at least relative to a decade ago, before China's success.

In light of this, developing countries should not seek simply to duplicate what China has done. Instead, they should learn the lessons of China's light industry in the context of today's production landscape, which is also being shaped by China's presence. These countries will have to focus their scarce resources on selected areas, discover the binding constraints in each area, apply policies to remove these constraints, and proactively develop competitive value chains and clusters in the industries where they have a comparative advantage in resource-based, labour-intensive light manufacturing.

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