Learning from China to Unlock India's Manufacturing Potential

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A CII – McKinsey Report

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Preface

China's manufacturing success over the last two decades has attracted the world's attention and been the subject of many an article in the press. Reactions to China's performance have varied from astonishment to disbelief. In India, some view China as a manufacturing giant that will soon conquer India's domestic market. Others are dismissive of China's success saying that it is based on investment and marginal pricing, not sustainable factors such as productivity improvements.

As our research verified, neither position is right. If India is to achieve its true potential as a manufacturing nation, it needs to understand the reasons behind China's success and the lessons this holds for Indian manufacturers and the Indian government. Charged with these objectives, McKinsey & Company undertook this study on behalf of the Confederation of Indian Industry (CII) in March 2002. McKinsey and CII are pleased to present the results of the study in this report.

In the course of the study, we conducted rigorous analyses of differences in GDP between China and India; conducted in-depth case studies of three products along their entire value chains; analysed 70 manufacturing sectors; made 9 man-weeks of visits to China; interviewed executives in 11 Chinese companies and in over 40 Indian companies in the same field; interviewed several Chinese government officials; and held discussions with several analysts and China experts in China and Hong Kong. This study also builds on over eight years of McKinsey experience in helping Chinese companies become competitive.

We hope that the findings of this study will be used to shape government policy in the manufacturing sector as well as to help Indian companies understand what specific actions they could take to become more competitive. Indeed, we hope that this study becomes the catalyst for the development of India's manufacturing sector and helps bring about a transformation of Indian manufacturing.

Several people contributed to the development of this report. We would like to thank several Indian companies, industry associations and government officials who gave us their time for discussions and meetings as we went about our work. CII's corporate membership and a large number of CEOs were involved in preparing this report. Several McKinsey consultants, too, were involved in the

research. Ramesh Mangaleswaran, Ranjit Pandit and Shirish Sankhe, partners with the McKinsey practice in India, provided overall direction. Deepak Goyal and Bharath Visweswariah led the study on a day-to-day basis. Rajiv Lochan, Shantanu Rastogi, R. Subramaniam and Ramnath Vaidyanathan conducted the analyses for the study. Paul Gao, George Geh, Gordon Orr, Antti Pitkanen, Jonathan Woetzel and David Xu, senior consultants in the McKinsey office in Shanghai, along with Shamus Mok and the McKinsey research division in Shanghai also supported the study. We would like to acknowledge the effort of all these people in helping us complete this study.

Executive Summary

In 1990, India and China had almost the same GDP per capita. Since then, driven by its manufacturing sector, China's economy has grown much faster than has India's and its GDP per capita of $3829 on a PPP adjusted basis in 2000 was 60 per cent higher than India's $2407. To achieve faster rates of economic growth, India urgently needs to strengthen its own manufacturing sector. Discovering and applying the lessons in China's success will be one effective way to do so.

But in India the reasons behind China's manufacturing success are little understood and, consequently, many myths have arisen. The findings from our study have exploded five specific myths.

- **Myth 1: China's growth was driven only by an increase in investments and not by productivity.** The reality is that labour productivity grew by 8.9 per cent from 1990 to 1999 and this was the major driver of the GDP per capita growth of 9 per cent in the same period.
- **Myth 2: Chinese manufacturing is driven primarily by exports.** The reality is that China's domestic sector is much larger than India's. In fact, the domestic sector accounts for two-thirds of the difference in Indian and Chinese per capita GDP. China's high domestic consumption is caused by low prices (between 20 and 40 per cent lower than Indian prices across most products).
- **Myth 3: Faulty accounting drives low prices in China.** The reality is that sustainable economic factors such as higher labour productivity, lower taxes and lower import duties are the causes of lower prices in China.
- **Myth 4: China's exports have grown on the back of marginal pricing.** The reality is that FDI was a major driver of Chinese exports, with foreign-invested enterprises accounting for 50 per cent of all exports in 2000.
- **Myth 5: Chinese products are always of poor quality.** The reality is that there are several Chinese manufacturers who produce products of world-class quality.

We also found out that these factors in China's growth were brought about by a well-executed series

of reforms undertaken by the Chinese government. Five key elements of these reforms were: (1) the reduction and simplification of indirect taxes which were reduced from over 30 per cent in 1994 to a VAT of 17 per cent currently; (2) reduction of import duties, which are now almost half of India's import duties (trade-weighted duties of 13 per cent as against 24 per cent in India); (3) the creation of an environment that fosters high labour productivity through liberal labour laws and through absorption of best practices from foreign-invested companies; (4) the creation of Special Economic Zones (SEZs) that have acted as a major magnet for investments (domestic and foreign) due to their investor friendly environment, their world-class infrastructure, the fiscal benefits they offer and the fact that they offer access to the large Chinese domestic market; and (5) the maintenance of low interest rates to stimulate investment. These low interest rates were achieved through fiscal prudence coupled with a high savings rate.

We believe that these policies can be replicated in India and could lead to the revival of its manufacturing sector. Moreover, reviving India's manufacturing is not merely possible but also urgently needed, as India will need to create a large number of manufacturing jobs to absorb the large increase in workforce expected by 2012. If India does not act immediately, the manufacturing sector could decline even further in the near future.

To revive India's manufacturing, its state and central governments will need to take a series of policy initiatives:

- Simplify indirect taxes on manufacturing by introducing a Value Added Tax (VAT) to replace sales tax, excise and other indirect taxes such as octroi and entry taxes. By 2006, tax incidence should be reduced to 15 per cent of the retail price with a single rate across all products and states (vs. almost 30 per cent currently with wide variations across products and states).
- Reduce import duties to a single rate of 10 per cent by 2006.
- Simplify labour laws by repealing section 5B of the Industrial Disputes Act and by allowing flexibility in the use of contract labour.
- Modify the Special Economic Zone (SEZ) policy to allow sales to the domestic market on payment of prevailing indirect taxes, and not prevailing high import duties. Modify labour laws to allow flexible hiring and retrenchment based on market requirements, as well as permit contract labour for all tasks.
- Enable lower interest rates (~5-6 per cent on five-year loans) through fiscal prudence and reforms to aid the financial sector.
- Eliminate incentives for small-scale industries (SSI) beginning with de-reservation of the ~60 sectors that account for 80 per cent of all SSI output.
- Undertake power sector reforms by disaggregating SEBs into separate generation, transmission and distribution companies and by privatising the power sector, starting with the distribution companies. In addition, allow generators to sell directly to consumers with demand above 0.1 MW.

Indian companies, on their part, can take steps to grow both domestic sales and exports even under

the current policy regime. Hitting lower price points by re-engineering products and improving productivity will stimulate domestic demand. In addition, Indian companies will need to strengthen their product development and marketing functions. As for exports, Indian companies can achieve dramatic growth by acquiring an “exports mindset”, building international marketing capabilities and better utilising fundamental advantages such as a good supply of raw material, low labour costs and superior design/engineering skills. These initiatives can help best practice Indian companies emerge as global scale players and can help them build large exports businesses. In fact, we believe that the lack of an appropriate mindset is as large a bottleneck as government policy to realising India’s full export potential. What is more, our study suggests that if manufacturing is revived, India could succeed in export markets in 75 per cent of all the sectors we studied and could also see the revival of domestic demand.

Taking the steps outlined above can dramatically transform India’s manufacturing sector over the next ten years: manufacturing output could increase to 25 per cent of total output by 2012 (vs. 16 per cent today), and it could create about 2.5 million additional jobs per year (compared to 1.2 million jobs per year in the 1990-2000 period). On the other hand, if India does not pursue an aggressive manufacturing reform agenda, it could be besieged by manufacturing imports, manufacturing output could decline to 13 per cent of GDP and might generate only about 1 million new jobs per year. Doing nothing different with Indian manufacturing is, therefore, not an option.

Introduction

China has overtaken India in almost all measures of economic growth. In particular, it has completely outdone India in manufacturing. Will China's manufacturing might overcome India in both exports and the domestic market? Or can India reinvigorate its manufacturing to become a contender in the global market? What lessons from China's success can India apply in doing so? To answer these and other questions, McKinsey & Company conducted a study on behalf of the Confederation of Indian Industry (CII). The objective of the CII-McKinsey study was to understand the drivers of Chinese competitiveness in manufacturing and to identify the lessons that would indicate how India could put its manufacturing sector on the path to high growth. It focused on identifying the key actions that the Indian government and Indian companies could take to revive the manufacturing sector.

The study involved many analyses. First, we analysed the sources of price difference between comparable Indian and Chinese products for colour televisions, ceiling fans and apparel. Next, we analysed the entire value chain of these products from raw materials (plastic, steel, aluminium, etc.) to final products to understand the sources of the price difference at every stage. In the process, we covered sectors that account for almost 80 per cent of India's manufacturing GDP. In addition, we drew upon the findings of an earlier study by McKinsey & Company on the Indian economy conducted by the McKinsey Global Institute (MGI) – *India: The Growth Imperative*.

The study included visits to Chinese factories and economic zones, detailed cost comparisons between India and China for identical products, discussions with Indian and Chinese policy makers, economists and business persons and a synthesis of multiple sources of manufacturing-related data.

This report sets out the conclusions of our study. It covers:

- A comparison of economic performance
- Drivers of China's manufacturing growth
- Policy initiatives that drove growth in China
- Implications for the Indian government
- Implications for Indian companies. ■

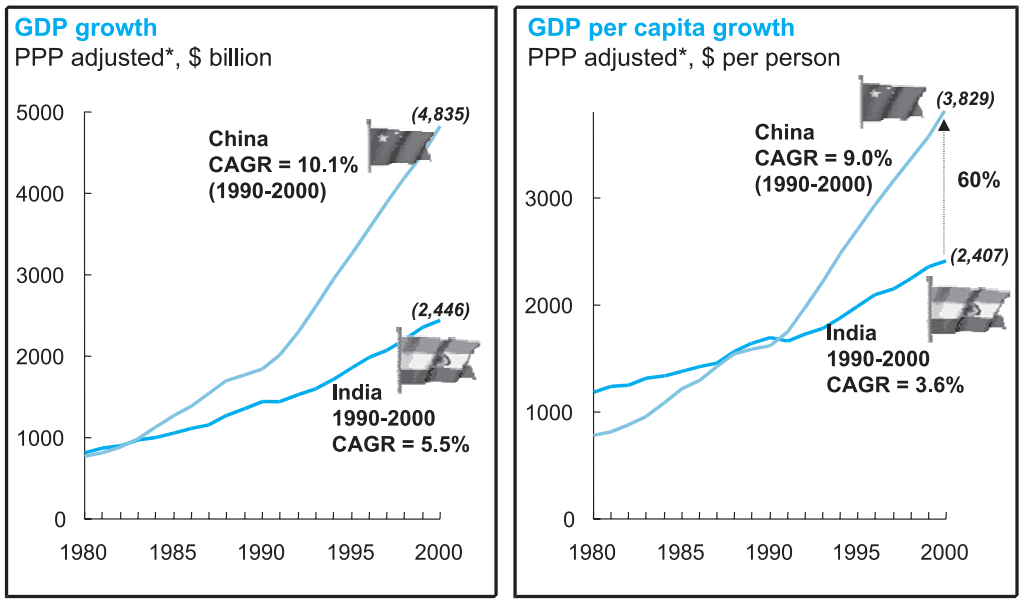
CHAPTER 1

A Comparison of Economic Performance

China's economy has completely outperformed India's over the last two decades in terms of growth rates, investments and employment. Over the last decade, China's GDP per capita has grown almost three times as fast as has India's (Exhibit 1). China's success in attracting huge foreign direct investment (FDI) is also well known. The country has attracted $336 billion in FDI in the last two decades and $38 billion in 2000 alone. In contrast, India attracted $18 billion and $2.4 billion respectively. In addition, China has pulled a lot more people out of agriculture into more productive

Exhibit 1

GDP AND GDP PER CAPITA GROWTH



* Adjusted for 2000 PPP
Source: World Development Indicators

jobs than has India. This has allowed China to reduce employment in agriculture from 68 per cent of the workforce in 1981 to 54 per cent by 1999. By contrast, India's share of agricultural employment has fallen much less sharply, from 69 per cent in 1981 to 62 per cent in 1999.

The major factor explaining this difference in economic performance is the creation of a strong manufacturing sector in China. In this respect, China has even surpassed the success of other high-growth Asian economies.

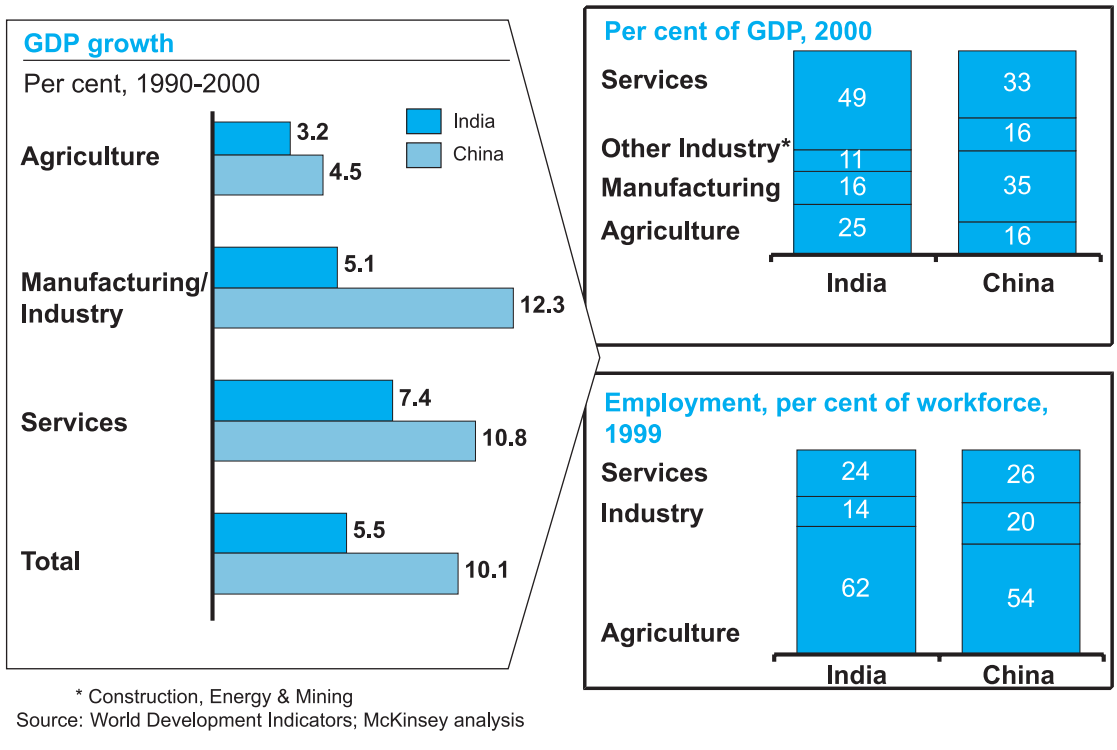
Manufacturing was a major driver of China's economic success

During the 1990s, China's manufacturing/industrial sector grew at 12.3 per cent. In contrast, India's grew at 5.1 per cent (Exhibit 2). As a result, China's manufacturing sector is much larger than India's in terms of contribution to GDP per capita ($1322 vs. $381, PPP adjusted) (Exhibit 3), share of GDP (35 per cent vs. 16 per cent) as well as employment (95 million vs. 45 million).

Today, China has emerged as a major manufacturing base for the world in several products and has captured a large share of world trade in different products. China accounts for 29 per cent of world trade in bicycles, 28 per cent in toys, 25 per cent in footwear and 20 per cent in ready-made garments. In contrast, India's share of world trade is 2.2 per cent in bicycles; 0.2 per cent in toys; 1.7 per cent in footwear; and 3.8 per cent in garments.

Exhibit 2

SECTOR-WISE GROWTH RATES, EMPLOYMENT AND SHARE OF GDP

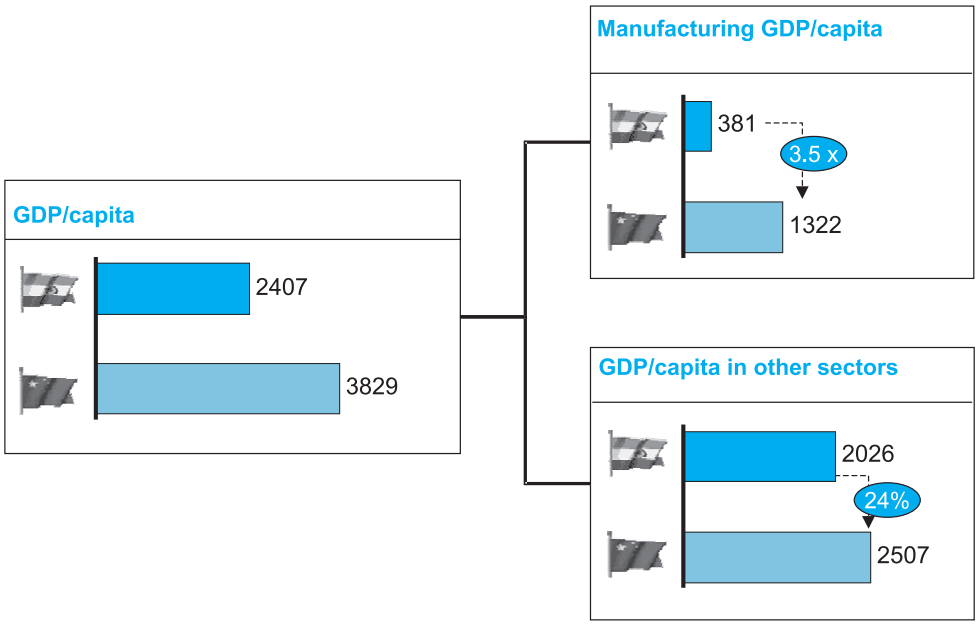


* Construction, Energy & Mining
Source: World Development Indicators; McKinsey analysis

Exhibit 3

SECTOR-WISE DIFFERENCE IN GDP PER CAPITA

$ per person, 2000, PPP



Source: World Development Indicators, McKinsey analysis

Exhibit 4

MANUFACTURING SECTOR SIZE COMPARISON

Country	Era	Manufacturing sector size Per cent of GDP	Manufacturing exports Per cent of GDP
China	2000	35	20
Japan	70s	35	N.A
Malaysia	90s	31	62
S. Korea	70s	26	25
Singapore	70s	24	77
Indonesia	90s	24	22
Thailand	80s	22	13
India	2000	16	6

Source: World Development Indicators

China's manufacturing success is similar to that of other Asian economies

This pattern of manufacturing-led growth is not unique to China. It was also the path other Asian economies took in their high-growth phases (Exhibit 4), when manufacturing accounted for 25-35 per cent of total output.

* * *

The strength of China's manufacturing sector is apparent to everyone. The question India needs to consider is how China succeeded in growing its manufacturing sector so successfully. In the next chapter, we look at the drivers of manufacturing growth in China. ■

CHAPTER 2

Drivers of China's Manufacturing Growth

The reasons for China's manufacturing success need to be better understood in India. The popular perception in the country is that China's growth was driven only by large investments aimed at increasing exports and by low prices made possible by poor cost accounting and shoddy quality.

The reality is that China's growth was driven not only by investments but also by a rapid growth in labour productivity, an emphasis on exports, strong domestic demand fed by low prices, and a stress by several companies on quality. In the rest of this chapter, we demolish various myths that exist in India about the causes behind China's manufacturing success.

Myth 1: China's growth was driven only by increases in investment, not by improvements in productivity

Gross fixed capital formation has undoubtedly been much higher in China than in most countries, amounting to 36 per cent of GDP in 2000 compared to 22 per cent in India. But this investment has contributed more towards raising labour productivity than towards raising employment. A strong productivity growth of 8.9 per cent per annum was the major pillar of growth in Chinese per capita GDP between 1990 and 2000. Most of this productivity growth came from the industrial/manufacturing sector, where productivity grew at 12 per cent per annum over the last decade compared to 2.2 per cent in India (Exhibit 5).

Today, China's manufacturing sector productivity is 1.6 times that of India and, in some sectors, as much as 5 times that of India (Exhibit 6).

Myth 2: Chinese manufacturing is primarily driven by exports

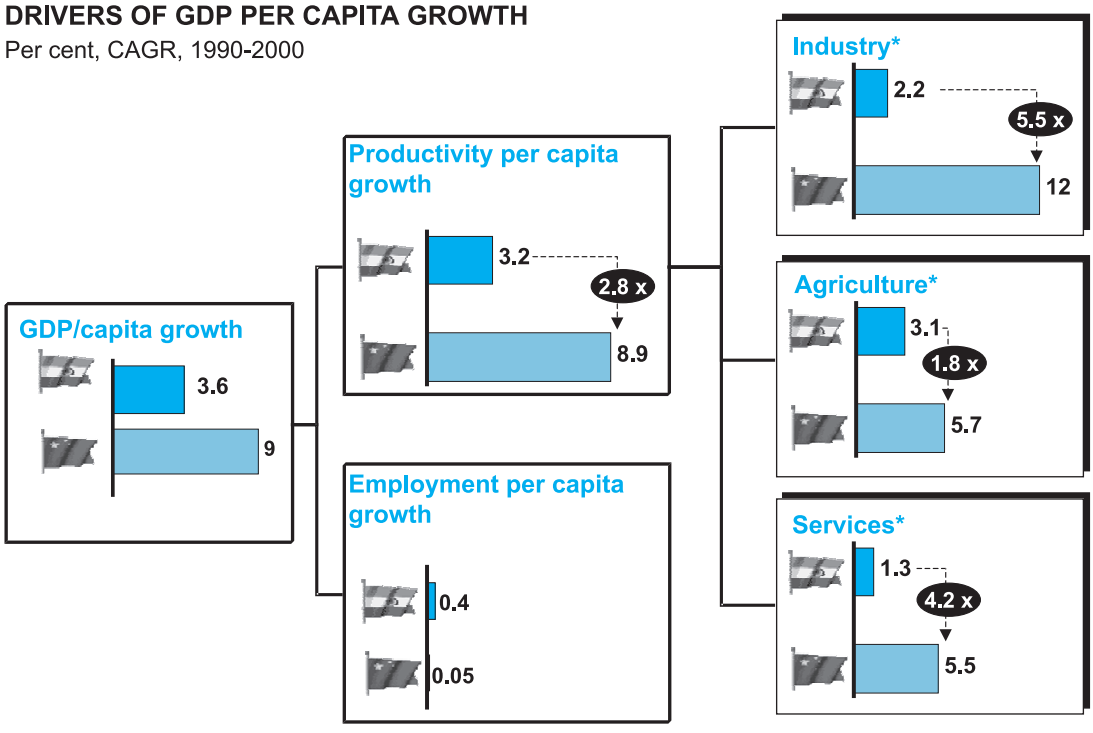
Contrary to popular perception, the domestic sector accounts for two-thirds of the difference between Indian and Chinese manufacturing GDP (Exhibit 7).

Domestic consumption in China is far higher than in India in several product categories. For example,

Exhibit 5

DRIVERS OF GDP PER CAPITA GROWTH

Per cent, CAGR, 1990-2000

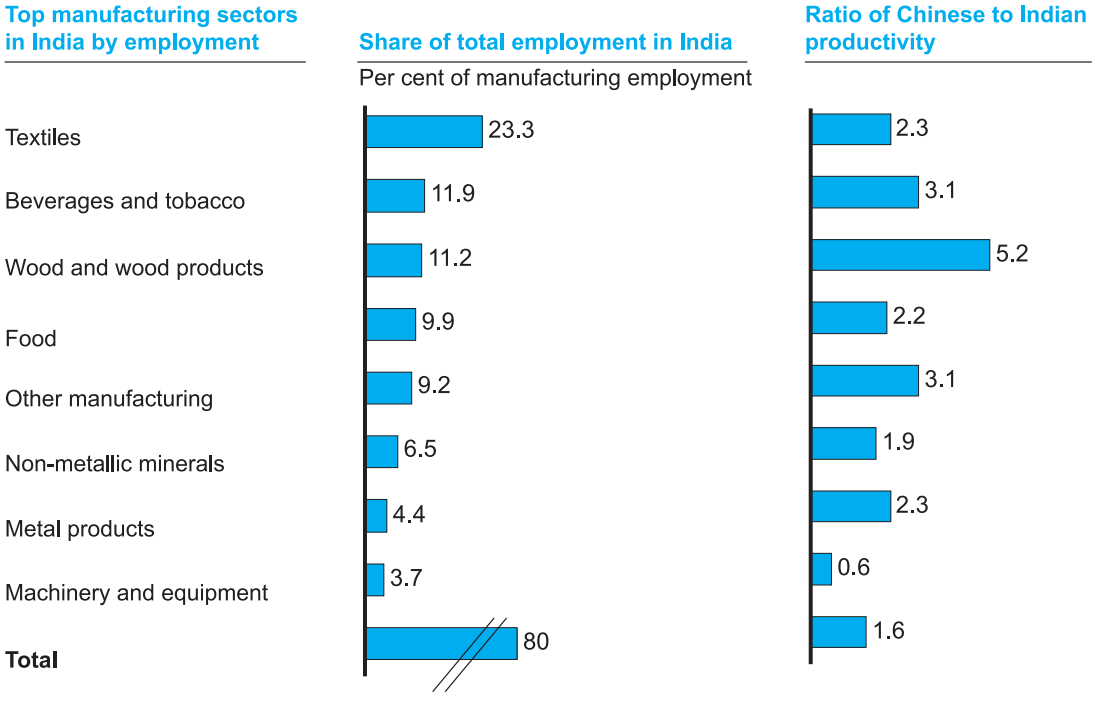


* Data for 1990-1999 period

Source: World Development Indicators, McKinsey analysis

Exhibit 6

PRODUCTIVITY DIFFERENCES ACROSS TOP MANUFACTURING SECTORS

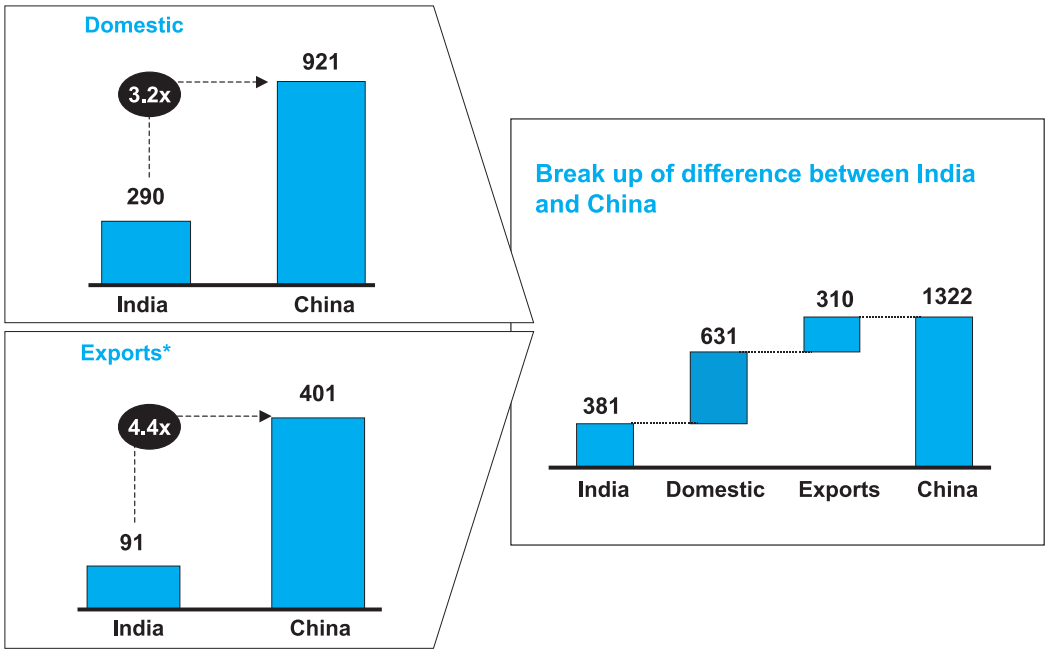


Source: NSO, CSSO, China Statistical Yearbook, 2000 data

Exhibit 7

DIFFERENCE IN MANUFACTURING GDP PER CAPITA

GDP per capita, $, PPP, 2000



* Assuming that half of total exports are from re-exports of imported products, where value-added is 20 per cent

Source : World Development Indicators

in colour televisions (TVs), the domestic market is six times larger than India's (30 million units vs. 5 million), while in steel and cement it is more than five times larger (Exhibit 8). Such large consumption levels cannot be explained away by higher per capita income or differences in income distribution alone. To illustrate, in colour TVs, China's larger population and higher income account for a difference of about 9 million units. Lower prices account for the remaining difference of 16 million units (Exhibit 9). Prices in China are as much as 20-40 per cent lower than prices of comparable products in India (Exhibit 10).

Myth 3: Subsidies, marginal pricing and poor cost accounting drive lower domestic prices in China

Lower domestic prices in China are based on sustainable economic factors. Five main factors account for these lower prices: lower indirect taxes, lower import duties, higher labour productivity, lower capital costs and lower margins. To take an example, in ceiling fans, the Chinese price of Rs.710 for a three-blade, 48-inch fan is 32 per cent lower than the Indian price of Rs.1,050. Lower indirect taxes in China account for almost half (14.5 per cent of the Indian price) of the total price difference. Higher labour productivity further lowers prices by 5 per cent, while lower raw material prices in China account for another 4 per cent and lower capital costs for 2.5 per cent of the Indian retail price. The remainder of the price difference (close to 7 per cent of retail price) is the result of other factors such as margins, capital productivity and difference in specifications between the Indian and the Chinese product, e.g., the use of steel rather than aluminium blades in Chinese fans (Exhibit 11).

Exhibit 8

DOMESTIC MARKET SIZE COMPARISON

Product	Units	Annual domestic consumption, 2000	Ratio
Steel	Million tonnes	28 / 141	5
Aluminium	1000 tonnes	550 / 3,530	6.4
PVC	1000 tonnes	930 / 3,150	3.4
Beer	Million litres	550 / 22310	41
CTVs	Million units	5 / 30	6
Air-conditioners	Million units	0.6 / 12	20
Motorcycles	Million units	3.7 / 11.5	3.1
Cement	Million tonnes	100 / 580	5.8
Cigarettes	Billion units	82 / 1750	21.3

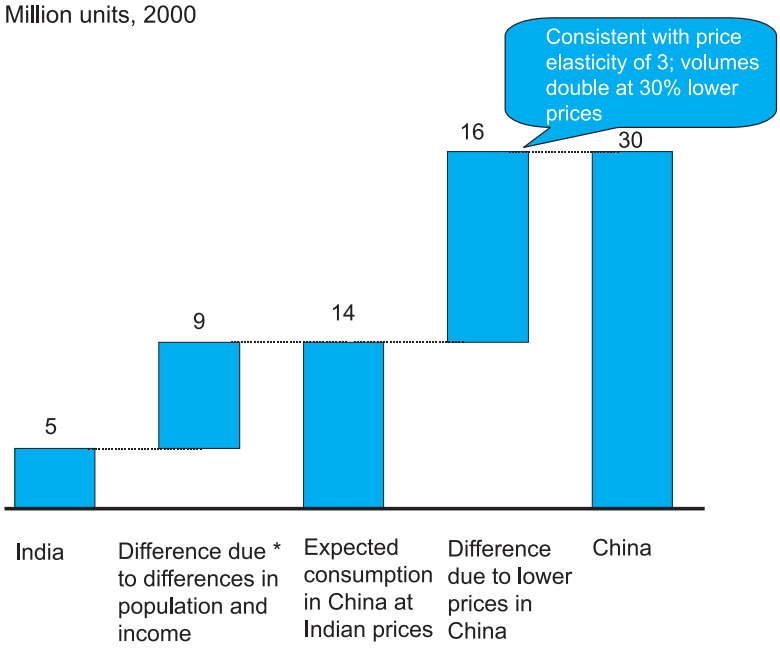
Higher consumption cannot be explained by higher income alone

Source: China Statistical Yearbook, industry associations, interviews, press articles, CMIE

Exhibit 9

DRIVERS OF DIFFERENCE IN DOMESTIC CONSUMPTION IN COLOUR TVs

Million units, 2000



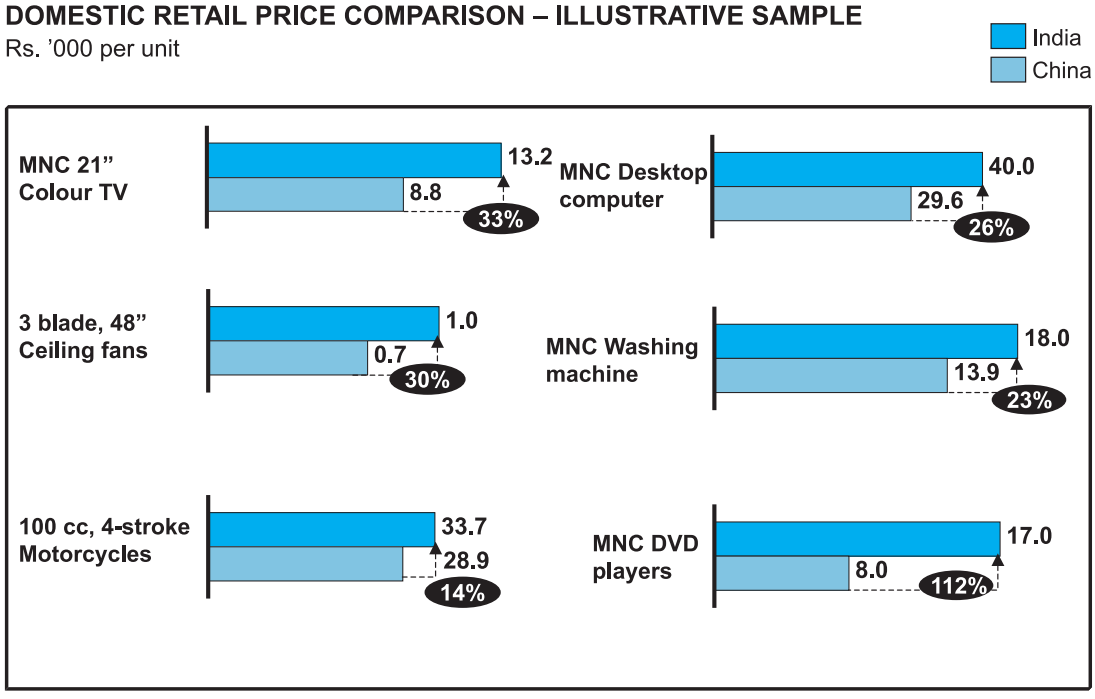
* Additional consumption in China assuming same levels of penetration across China's income categories as in India

Source: McKinsey analysis, CETMA

Exhibit 10

DOMESTIC RETAIL PRICE COMPARISON – ILLUSTRATIVE SAMPLE

Rs. '000 per unit



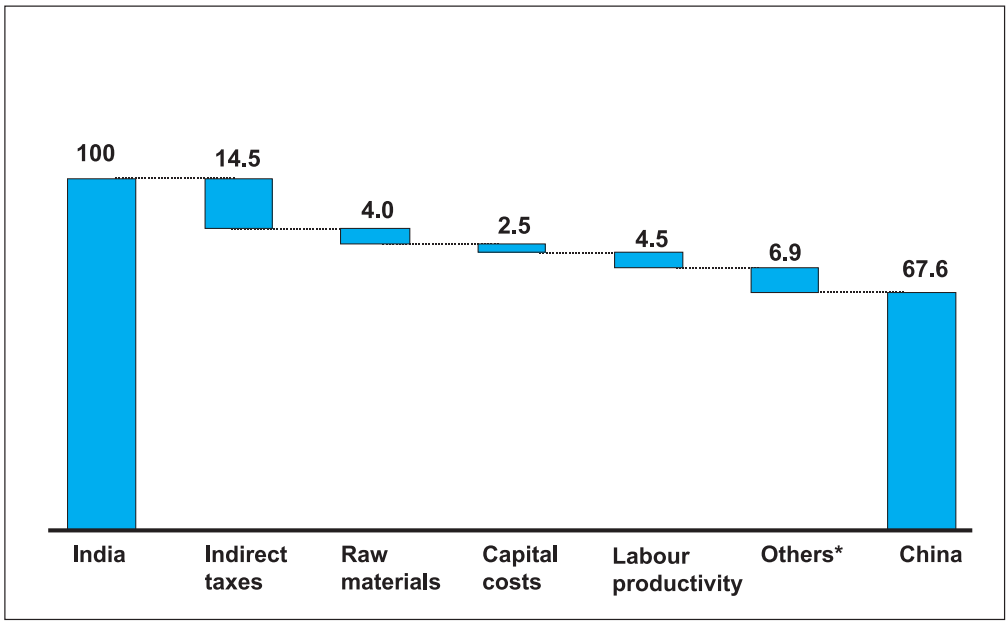
Note: 8.28 RMB = 1 USD, Rs. 49 = 1 USD

Source: Retail surveys, 2002

Exhibit 11

DRIVERS OF PRICE DIFFERENCE – CEILING FANS

Indian retail price indexed to 100



* Includes margins, capital productivity and lower specifications for the product in China, due to the use of steel rather than aluminium

Source : Interviews, plant and store visits, data analysis, McKinsey synthesis

To further understand the sources of price difference in raw materials, we studied the prices of key inputs (e.g., steel, aluminium, cotton yarn). We repeated this exercise along the entire value chain until we had broken down all the raw materials into their constituent labour, capital and margin elements. In this process, we covered products across sectors that account for almost 80 per cent of India's manufacturing GDP (*see* Appendix A for the detailed methodology).

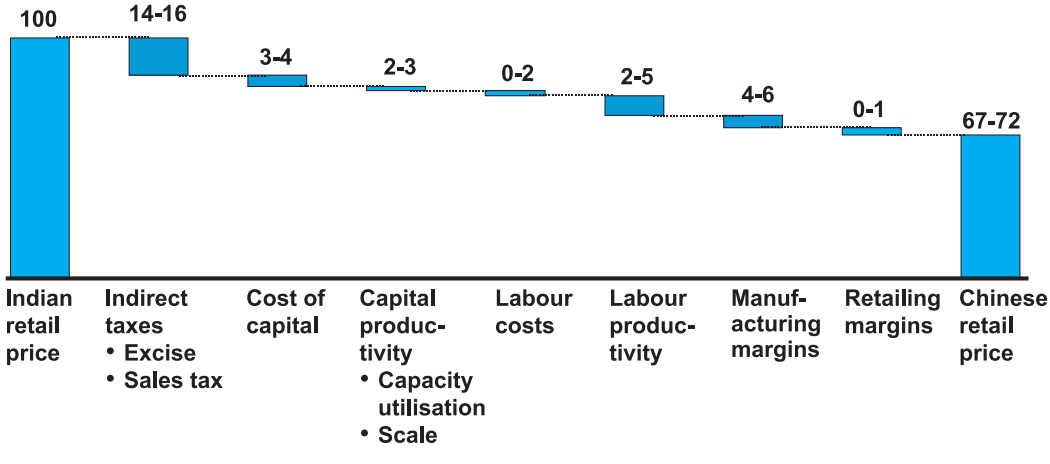
We conducted similar analyses for colour TVs and apparel and then synthesised the results of our analysis across all of these value chains to arrive at the overall drivers of price difference between India and China. We found that price differences between India and China were explained mainly by lower margins, lower taxes, higher labour productivity and lower cost of capital in China (Exhibit 12). Lower margins are driven by lower import duties (since import parity prices determine price ceilings in the domestic market, low import duties result in lower margins). Lower margins are also driven by higher competitive intensity which is likely to diminish with growing industry consolidation and is therefore not discussed any further in this report.

It is commonly believed that lower power costs, labour subsidies and faulty capital pricing are the sole drivers of China's competitiveness. This is not true. In the case of power, we found a wide variation in the prices of power across different locations. We also found that prices were not always much lower than those in India. For instance, a plant in Shenzhen (near Hong Kong) paid Rs.4.7 per unit of power and an apparel plant based just outside Shanghai paid about Rs.4 per unit. On the other hand, one plant in Chongqing (3-4 hours from the eastern coast of Shanghai) paid about Rs.2.4 per unit of power. A similar variation in power prices is seen in India. A recent CII study found that the total cost of power

Exhibit 12

OVERALL DRIVERS OF PRICE DIFFERENCE

Indian retail price indexed to 100



Source: Plant and store visits, discussions, data analysis, McKinsey synthesis

varied from Rs.2.7 per unit in Kerala to Rs.4.8 per unit in UP.

On the issue of power, a more stark difference exists in quality. While Indian companies face frequent power cuts and so have to maintain their own generation capacities, Chinese companies have access to an uninterrupted power supply. The need to maintain their own generation capacities drives up the total cost of power for Indian companies.

In the case of labour, too, we found that wage rates in China are not necessarily lower than those in India. While the wage rates at most factories we visited were about Rs.6,000 per worker per month, in other plants we visited near Shenzhen the wage rate was above Rs.9,000. Further, as in India, wage rates vary widely from big cities to smaller towns. For example, wage rates for plants in Shanghai are around Rs.6,000 but for plants located even about two hours outside Shanghai they drop to about Rs.4,000. A similar variation between big cities and smaller towns is seen in India as well. While wage rates in Mumbai are around Rs.10,000, wages at a plant two hours away from Mumbai were around Rs.6,000.

When it comes to capital, the common belief is that most Chinese companies are able to borrow easily from banks and often do not repay their loans, making capital costs extremely low and contributing to bad loans in the banking system. This may be true for some of the State Owned Enterprises (SOEs). However, the truth is that over 70 per cent of China's industrial output comes from the private sector and from multinational companies (MNCs) with prudent accounting practices. The MNCs use their global auditors to audit their accounts. Chinese private companies that wish to list on Chinese stock exchanges also need to be audited by an international auditor.

The rest of this section details the major drivers of price difference listed earlier, namely import duties, indirect taxes, labour productivity and capital costs.

Import duties

The average incidence of import duties in China is 17 per cent and the trade-weighted average is about 13 per cent, almost half India's trade-weighted level of 24 per cent. Import duties on several key raw materials such as plastics and aluminium are much higher in India than in China (Exhibit 13). Higher import duties on raw materials result in higher prices of inputs as most domestic players resort to import parity pricing. For example, India's copper prices are 25 per cent higher than China's, driven by a 25 per cent duty in India vs. a 2 per cent duty in China.

Indirect taxes

China has a flat 17 per cent VAT (about 14 per cent of retail price), while India's indirect taxes range from 25 to 30 per cent of the retail price for most manufactured products (Exhibit 14).

Labour productivity

Labour productivity in China is between 10 per cent and 300 per cent higher for different product categories. For example, it is about 10 per cent higher in the assembly of colour TVs, 50 per cent

Exhibit 13

IMPORT DUTY COMPARISON

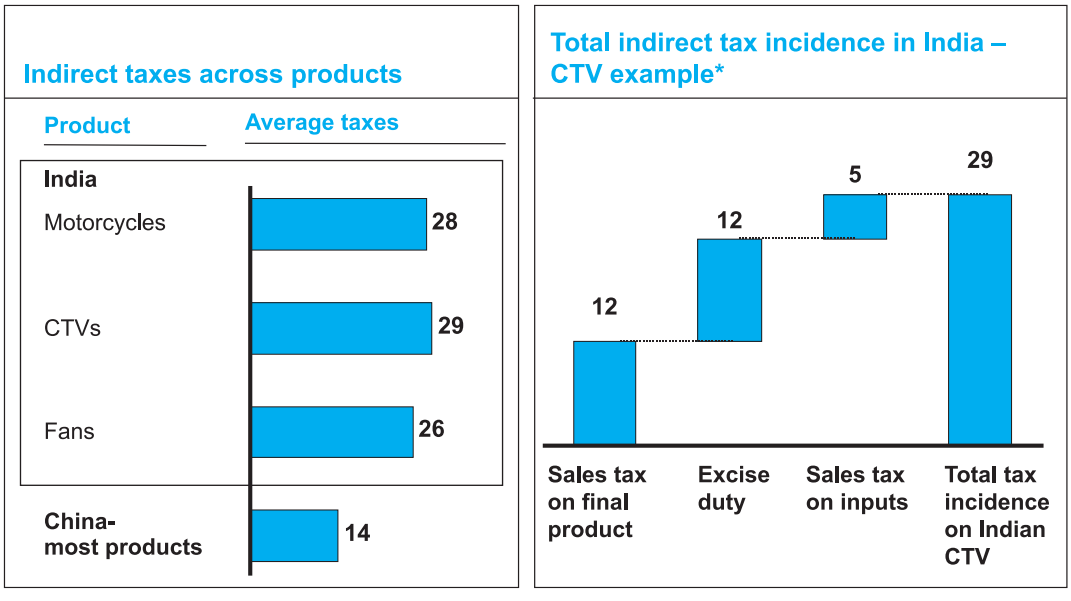
Sector	Key raw materials	Import duty on raw material (Per cent, 2001)	Prices (Rupees, 2001)	Price difference (Per cent)	Units
Consumer electronics	• CPT	30 / 10	2,933 / 2,053	30	unit
	• Plastic (PP)	30 / 10	49590 / 39440	21	tonne
Basic metals	• Aluminium	15 / 8	1,816 / 1,619	11	tonne
	• Copper	25 / 2	2,430 / 1,830	25	tonne
	• Zinc	25 / 3	66,000 / 46,400	30	tonne
Chemicals	• Phenol	15 / 5.5	49,510 / 46,668	6	tonne
	• Toluene	25 / 5	27,053 / 22,898	15	tonne
Petroleum and products	• Diesel	20 / 6	19 / 15	21	litre

Source: CMIE, China Statistical Yearbook

Exhibit 14

INDIRECT TAX COMPARISON

Per cent of retail price, 2002



* Average taxation for sales across the country; calculated based on the cost structure of an MNC player in India

Source: McKinsey analysis

higher in ceiling fans, 1.75 times higher in the stitching of apparel and more than three times higher in footwear (Exhibit 15).

Capital costs

Capital costs are lower in China due to lower interest rates. From 1997 to 2000, real interest rates for five-year loans in China fell from 7.8 to 4.9 per cent (vs. an increase from 6.4 to 7.8 per cent in India, due to a reduction in inflation rates) (Exhibit 16). This trend continued in 2001, with interest rates in both countries falling by about 1 percentage point. The weighted average cost of capital for China is thus about 9 per cent, while for India it is about 12.5 per cent for a debt-equity ratio of 1:1.

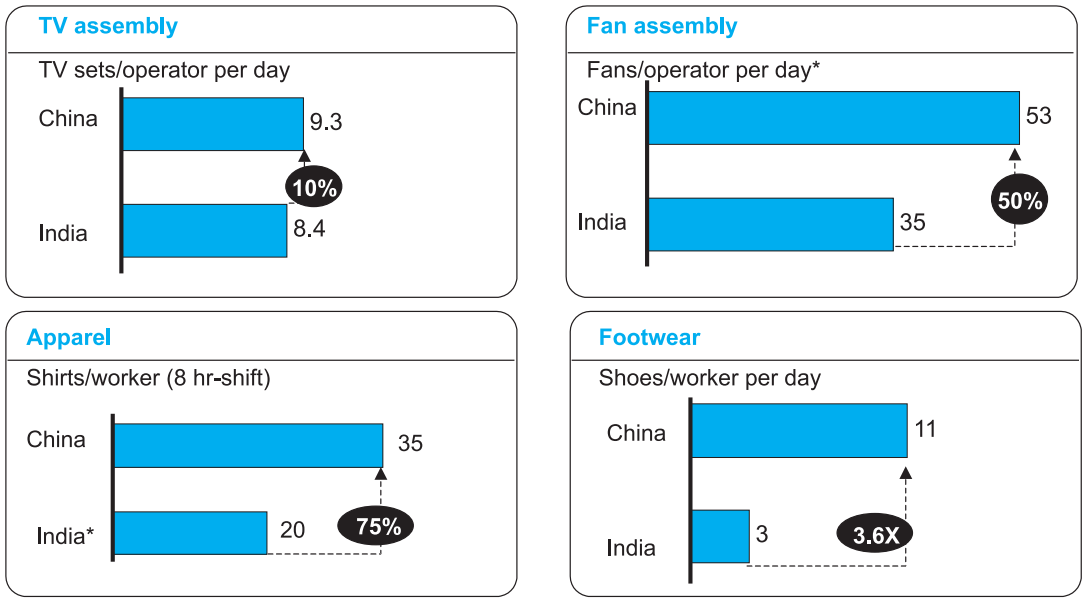
Myth 4: China's exports have grown on the back of marginal pricing

It is not pricing but liberal FDI, facilitated by high labour productivity and superior infrastructure, that has driven the growth of Chinese manufactured exports. China's manufactured exports in 2000 were almost seven times higher than India's at $220 billion compared to $33 billion. Also, China's manufactured exports grew twice as fast as India's over the last decade, at 16 per cent compared to India's 8 per cent.

Of the total FDI of $38 billion that China received in 2000, $27 billion went to the manufacturing sector. In contrast, India received only 2.4 billion in FDI, of which the manufacturing sector received a little less than $2 billion. FDI has played a key role in boosting Chinese exports, and foreign-invested

Exhibit 15

DIFFERENCE IN ORGANISED SECTOR LABOUR PRODUCTIVITY ACROSS SECTORS



* Adjusted by 20% for greater extent of assembly of components by suppliers in India

Source: Interviews, McKinsey analysis

companies accounted for almost 50 per cent of China's exports in 2000.

Special Economic Zones (SEZs), as a result of their investor friendly environment, have played a pivotal role in attracting FDI into China. More than 75 per cent of the FDI in 2000 went into these economic zones, and they accounted for almost 50 per cent of China's exports. Liberal labour laws and world-class infrastructure are two key reasons why China, and SEZs in particular, receives so much export-oriented FDI.

World-class infrastructure has also fostered export growth by enabling superior delivery. Chinese shipments typically reach the US within 2-3 weeks of dispatch. By contrast, India's exports can take anywhere from 6 to 12 weeks due to long delays at customs, long loading and unloading times and high transit times. These delays are particularly crucial in sectors such as footwear and apparel where speed to market is critical given fast-changing fashions. Longer lead times thus greatly deter buyers from sourcing from India in these sectors (Exhibit 17).

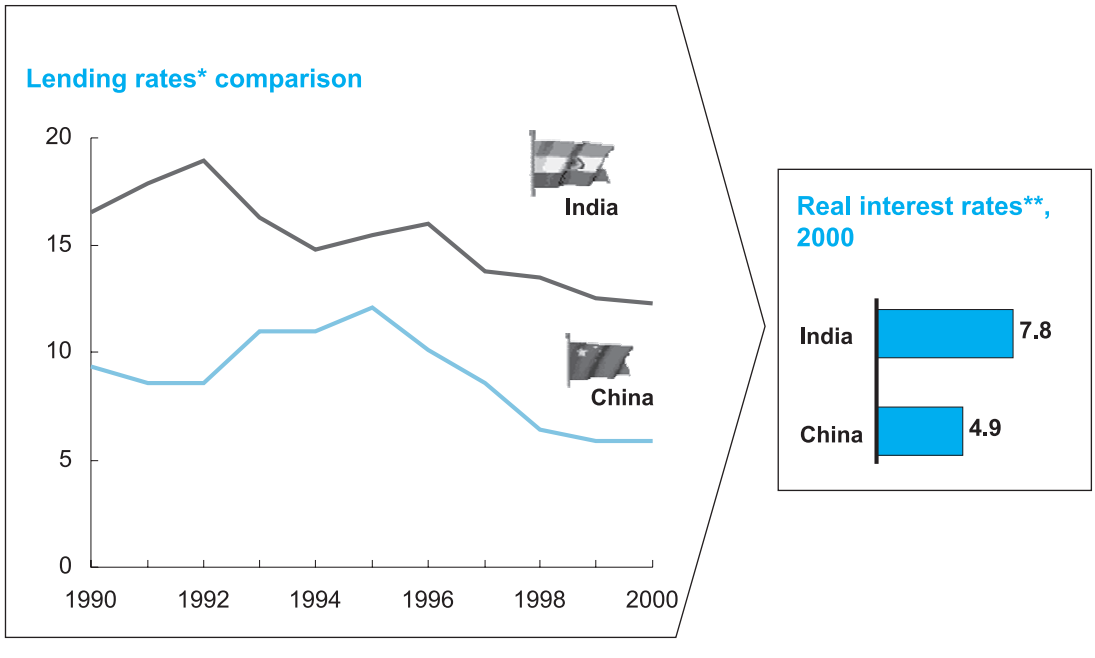
Myth 5: Chinese products are always of poor quality

While some Chinese manufacturers produce goods of inconsistent quality, several other players manufacture products of world-class quality. The inflow of large amounts of FDI and low import duties ensure that Chinese companies face stiff competition from world-class players. This exposes Chinese companies to best practices and thus helps raise quality standards.

Exhibit 16

INTEREST RATES COMPARISON

Per cent



* For five-year loans

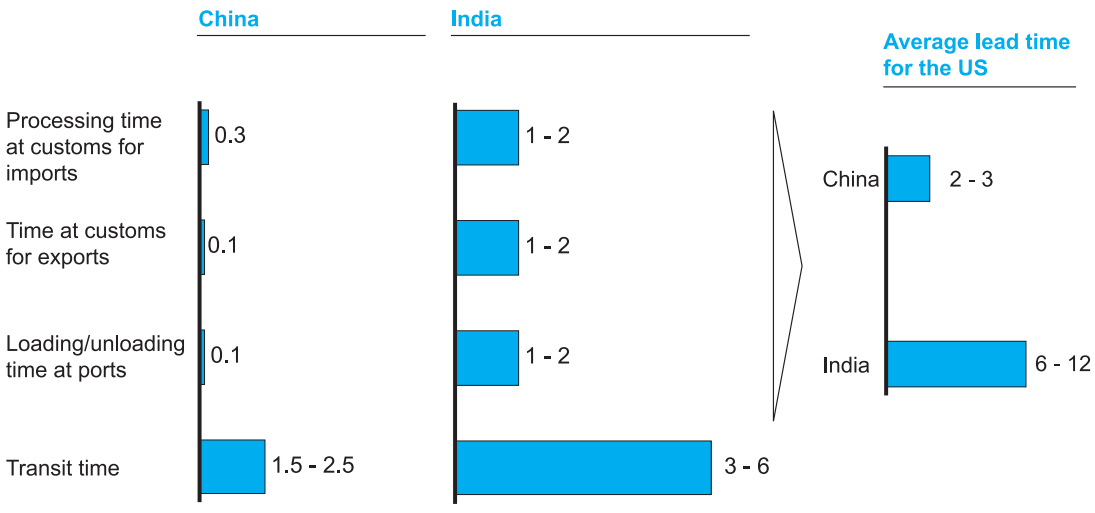
** Lending rates less inflation, calculated using the GDP deflator; 4.5% in India, 1% in China

Source: World Development Indicators

Exhibit 17

LEAD TIME COMPARISON

Time in weeks, 2002



Source: Interviews, CII-World bank study, interviews

Exhibit 18

QUALITY IMPROVEMENT INITIATIVES BY CHINESE COMPANIES – GALANZ EXAMPLE

Key initiatives

- Installed standardised and documented quality control processes
- Developed quality analysis tools
- Implemented strict quality inspection processes for raw materials, WIP and final products
- Implemented supplier programme
- Developed order management programme

Results

Obtained both general and industry specific quality certificates :

- GS (German Equipment Safety Act Certification)
- CE (European standard certifying product safety & health standards)
- UL (Underwriter's Laboratory Certification US)
- NEMKO (Norwegian certification of quality for electrical equipment)
- ISO 9001

Source: Literature search, McKinsey analysis

Exhibit 19

MANUFACTURING CAPABILITY IN THE AUTOMOTIVE SECTOR

Several Chinese companies, especially those with significant exports businesses, have put in place stringent quality checks. This is reflected in their securing a large share of the Original Equipment Manufacturing (OEM) business of companies such as Nike and Mattel. In fact, it is estimated that Nike produces as much as 40 per cent of its footwear in China. In the production of microwave ovens, Galanz, a Chinese company with a large OEM business, has instituted several quality improvement measures (Exhibit 18). These measures coupled with its low-cost production capability have seen Galanz emerge as the largest manufacturer of microwave ovens in the world, with a 30 per cent share of the world's microwave oven production. In the automotive industry as well there is evidence that Chinese companies are improving quality to world-class standards (Exhibit 19).

* * *

Many of the factors responsible for China's success in manufacturing only exist because of the policies put in place by the government. In the next chapter, we describe the critical role of policy in China's success. ■

CHAPTER 3

Policy Initiatives that Drove Growth in China

China reached its current strong position through a series of well-planned reforms initiated in 1978. The primary objective of these reforms was to move people out of agriculture into the more productive sectors of the economy. This remains one of the main priorities of China's policy makers even today.

True, China faces significant challenges (such as banking-sector and SOE reform) to keep growing at current high levels. Although this suggests that Chinese policy has not always been entirely faultless, there are, nevertheless, several elements of Chinese policy that India can adapt to foster its own manufacturing growth.

Five key elements of the Chinese reform process have strengthened its manufacturing sector: (1) the reduction and simplification of indirect taxes; (2) the reduction of import duties; (3) the creation of a productivity-enhancing labour regime; (4) the creation of investor friendly economic zones that attract huge amounts of FDI; and (5) the maintenance of low interest rates to catalyse industrial and infrastructure investments.

The remainder of this chapter delineates these policies in greater detail.

Reduction and simplification of indirect taxes have boosted demand

Prior to 1994, the average taxes on manufactured goods in China amounted to 32 per cent of ex-showroom prices and myriad taxes existed. Then, in 1994, the government simplified indirect taxes in one fell stroke. Today, China has a single 17 per cent Value Added Tax (VAT) on most manufactured goods and in all provinces. Tax sharing between the centre and provinces has also been simplified and taxes are now shared between the central and the local governments on a 75:25 basis.

Another important feature of China's VAT regime is that few companies have VAT exemptions. This ensures that companies set up right-sized facilities to serve all the provinces and so avoid the fragmentation of capacities. By contrast, in India, the system of cascading sales taxes, location-based tax exemptions and barriers to inter-state movement of goods (e.g., entry taxes, octroi, central

sales tax) actually encourages the fragmentation of manufacturing capacities.

Reduction in import duties has resulted in a low-cost economy

China reduced average import duties from 45 per cent in 1992 to 17 per cent in 2000 (13 per cent on a trade-weighted basis). With its accession to the World Trade Organisation (WTO), average tariffs on industrial products will further decline to about 9 per cent by 2005. As mentioned earlier, lower import duties on key raw materials significantly reduce costs in the value chain and, therefore, lower consumer prices. Lower import duties also increase competitive intensity and force manufacturers to raise productivity.

The reduction in taxes and duties and, therefore, prices has resulted in rapid volume growth. In 1985, taking colour TVs as an example, domestic taxes were 32 per cent and import duties on picture tubes were 80 per cent. Consequently, prices were 30-40 per cent higher than international prices and domestic sales volumes were 4 million units per annum. Today, by contrast, taxes and duties have fallen to 17 and 10 per cent respectively and domestic volumes have skyrocketed to 30 million units per annum.

A productivity enhancing labour environment has been created

Three things stand out in China's management of labour. First, after the labour law reforms of the mid-1980s, all new companies in China have the flexibility to retrench workers and to pay productivity-based wages. These policies began with the units that were set up in the SEZs and now cover all new investment in China. Second, together with labour law reform, the government strengthened social security (e.g., providing assistance of $35 per unemployed person per month in Beijing and $10 per month in the hinterland for up to three years after the loss of a job) and eased previously stringent restrictions on labour mobility (imposed through the residence permit system). Third, employees are often provided with a variety of facilities by the government or by companies, e.g., accommodation close to the place of work.

These favourable labour conditions are one of the factors that contributed towards attracting FDI. Foreign-invested enterprises, in turn, infused best practices into Chinese manufacturing. Over time, these practices have percolated to local companies as well and have resulted in overall growth in labour productivity.

Another striking feature of the Chinese workforce is its large proportion of women (44 per cent in China versus 18 per cent in India). Many women, who typically have high school education, work between the ages of 16 and 22 before getting married and ceasing to work.

SEZs supported by the right policies and infrastructure have attracted investments

Starting out with four SEZs in 1978, China has now created over 500 economic zones. SEZs in China served as pilots for the pro-investment economic policies of the Chinese government and are

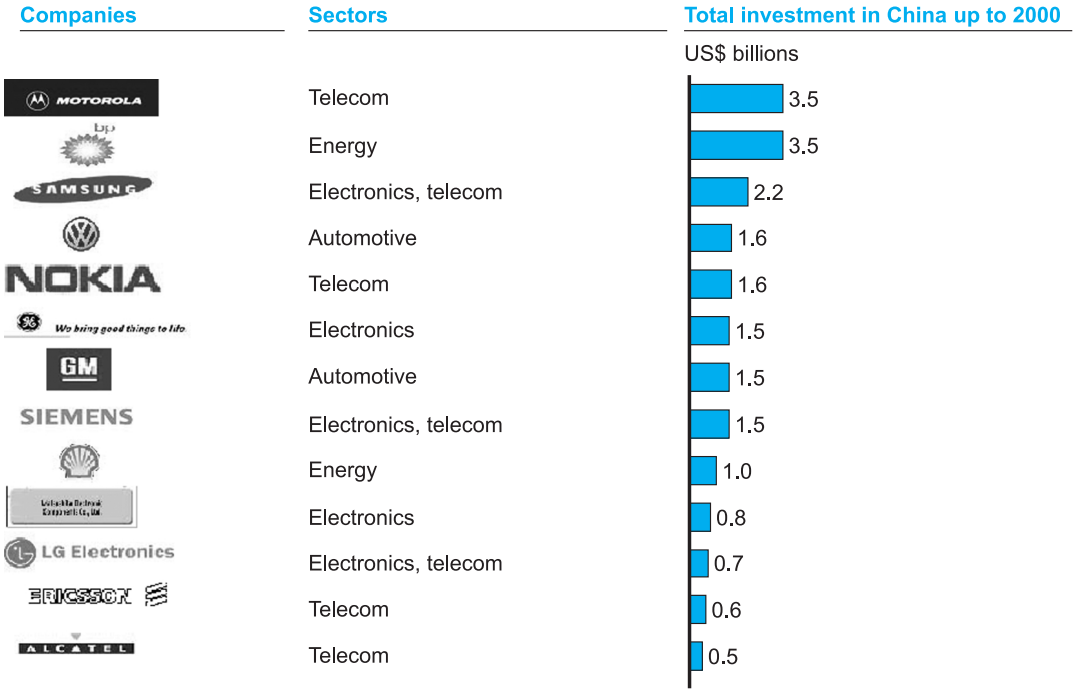
now major magnets for investment. Of the total FDI of $38 billion that China received in 2000, these zones received 75 per cent or almost $30 billion. China even has zones as small as around 3,000 acres in size (e.g., the Waigaoqiao zone in Shanghai; the Beijing Development Authority – BDA in Beijing) that have attracted above $3.5 billion of investment each. In fact, anchor tenants in these zones have invested close to $1 billion in their own and in allied facilities. For example, Nokia and its key suppliers have together invested over $1 billion in the BDA zones. In all, Nokia had invested $1.6 billion in China by the year 2000. Similarly, China has received large investments from several "lighthouse" investors (Exhibit 20).

All of these zones are promoted by the government (central, provincial or local) and provide tenant companies with several benefits: quick approvals; ready office and plant infrastructure; world-class transport infrastructure; attractive financial incentives; and ready access to the large domestic market.

For example, at BDA, approvals for set up and closure of business units take no more than 15 days. All government departments that need to provide clearances are located in the zone itself. The zone also provides investors with office space, telecom facilities, power, water, sewage and heating systems. Investors also receive support with recruiting labour and arranging clearances for contract labour. Rapid approvals, support services and ready infrastructure collectively result in short commissioning times for manufacturing investments. One project, for instance, went from breaking ground to start of production in less than one year.

Exhibit 20

INVESTMENTS IN CHINA BY LARGE MULTINATIONALS



Source: Annual reports, company websites

All SEZs have world-class transport infrastructure. For example, the Shenzhen SEZ has multi-lane highways within the zone and is connected to major cities such as Guangzhou through expressways. Shenzhen also has eight port areas and is the second largest container port terminal in China, after Shanghai. Shenzhen's Huangtian airport is now China's sixth biggest airport and serves both domestic and international destinations, including Singapore, Jakarta and Bangkok. Even the smaller economic zones in China have world-class infrastructure both within the zone as well as for connecting the zone to the outside world.

All zones offer investors financial incentives, with foreign companies subject to a corporate tax rate of 15 per cent as opposed to 33 per cent for domestic companies. In addition, foreign companies are offered tax breaks for five years (no corporate tax for three years and halved for the next two) and a subsequent corporate tax rate of 15 per cent as opposed to 33 per cent for other companies.

In addition to these benefits, units based in an SEZ in China are allowed to sell their output in the domestic market on payment of local tax (VAT) as well as duties on imported raw material. Chinese companies bifurcate their accounts for domestic and export sales to ensure that this policy works well.

In India, in contrast, as per current policy, units based in SEZs are allowed to access domestic markets – Domestic Tariff Area (DTA) – only on payment of prevailing high import duties on finished goods. This can deter several investors from putting up plants in SEZs since access to the large and stable domestic market is an important criterion for investments and sales to the DTA at the currently high import duty levels will be practically nil in several categories.

Low interest rates have stimulated investments

China's high savings rate of 40 per cent (compared to 21 per cent in India) and low fiscal deficit of 4.6 per cent (vs. 10.1 per cent in India) have resulted in a low interest rate regime. We recognise that China's stated budget deficit does not include the quasi-fiscal activity of the banking system. However, after accounting for all "off-budget" transactions, it is still likely that China's total fiscal deficit will be lower than that of India. Moreover, the deficit has funded the creation of several public assets through infrastructure investments (as opposed to funding predominantly revenue expenditure in India) and some China observers maintain that these public assets could help see China through a financial crisis.

Other policies have had a positive effect

Three other elements of Chinese policy have had a positive effect on manufacturing:

- **The availability of power:** China has created a power sector capable of meeting the needs of industry. Unlike Indian companies, Chinese companies can count on an uninterrupted supply of power at all times. While China has installed generation capacities of 270 GW, India has about 93 GW. China is also growing its generation capacity much faster than India. For example, it added 20 GW of capacity in 1999 compared to 4.2 GW in India.

- **Government responsiveness to business needs:** The responsiveness of the Chinese government and administration to business needs is striking. Every government has three sets of performance metrics: GDP growth within its territory; investments attracted; and law and order. Non-achievement of any of these goals could result in replacement of responsible government officials.

- **Incentives to support the growth of rural industry:** In the 1980s China's policies provided support to rural industry which was characterised by collectively owned enterprises called Township and Village Enterprises (TVEs). TVEs played a large role in the development of Chinese industry in the initial years after reform, although their role in the economy is now diminishing. An important point to note is that, unlike with Small Scale Industries (SSIs) in India, benefits to TVEs were not linked to scale. As a consequence, TVEs have no incentive to stay small and sub-scale. In fact, several large companies in China today started off as TVEs and some still are TVEs. For example, Haier, a $3 billion company in the white goods industry, is still a TVE.

* * *

While government policy has led to the creation of an environment favourable for growth in Chinese manufacturing, a lot remains to be done. Indeed, China faces several significant challenges going forward. The "Big 4" banks that control over 80 per cent of deposits and lending are technically bankrupt by international accounting standards. State Owned Enterprises (SOEs) that employ 60-70 per cent of urban workers need financial restructuring (they are believed to contribute 70-80 per cent of China's non-performing loans) and productivity improvements. Furthermore, unemployment may temporarily soar as restructuring causes SOEs to lay off workers. Finally, by 2020, the number of retired people in China will have doubled to 19 per cent of the total population and the current pay-as-you go pension system will need to be reformed. Opinions on China's readiness to address these challenges range from "China's economy is a bubble waiting to collapse" to "China has the elements and institutions to address them successfully".

These problems imply that not all elements of Chinese policy are sound. However, there are several elements of Chinese policy that India can, and should, adapt to revive its manufacturing sector. ■

CHAPTER 4

Implications for the Indian Government

China may have surged ahead of India in manufacturing, but India can still act to unleash the potential of its manufacturing sector and develop manufacturing into an engine of growth. India has the intrinsic advantages (low-cost labour, skilled engineering workforce, raw material availability, etc.) to emerge as a strong manufacturing base. Indeed, there is space for both India and China to succeed and become global manufacturing hubs. However, this will require that a new approach be adopted by both the government and companies. Moreover, continuing with the current approach could have disastrous consequences: greater imports, far fewer jobs and lower manufacturing competitiveness as a nation. Continuing as before is therefore not an option.

It is necessary to revive the manufacturing sector

India urgently needs to revive its manufacturing sector. Previous work on the Indian economy *(India: The Growth Imperative)* estimated that India needs to create 7-8 million new jobs each year outside agriculture just to stay at its current unemployment level of 7 per cent. Manufacturing jobs are ideal for workers transitioning out of agriculture. The revival of manufacturing can create close to 2.5 million new jobs each year (as opposed to one million jobs created each year over the last decade).

As discussed earlier, the share of manufacturing in GDP at our stage of development should be 25 per cent. However, in the past decade, manufacturing's share of GDP has fallen from 17 per cent to 15.8 per cent. If this trend were to continue over the next decade, manufacturing would shrink further. Furthermore, as duties came down, the domestic sector could see a large increase in imports that could wipe out several manufacturers. With declining competitiveness, exports could shrink as well. Exports in the apparel sector, for example, which currently account for almost a fifth of India's total exports, could decline dramatically after the import quotas are removed in 2005. India's share of apparel exports could decline from its current 3.2 per cent to 1.6 per cent by 2012. This would result in the creation of far fewer jobs than required in the labour-intensive apparel sector.

Eventually, manufacturing could shrink to just 13 per cent of the economy by 2012 and be able to

create only one million additional jobs each year (Exhibit 21). Clearly, this is an outcome that will be undesirable for India. Therefore, an accelerated revival of Indian manufacturing must be a key priority for the Indian government and companies. The government needs to support the manufacturing sector with a favourable policy regime while Indian companies need to recast their strategies for rapid domestic and international growth. In developing a revival strategy for Indian manufacturing, both the Indian government and companies should recognise the need for rapid pace and bold actions. China has a formidable starting position and will not stand still. Very soon, Chinese dominance could extend to several manufacturing industries. Also, from an investor's perspective, merely claiming parity with China will not help, as investors will continue to invest in China, a country they are familiar with. India will need to put together an even more compelling package. While this presents India with a daunting task, we believe that this task is achievable and that a bold and aggressive reform agenda can and must be implemented.

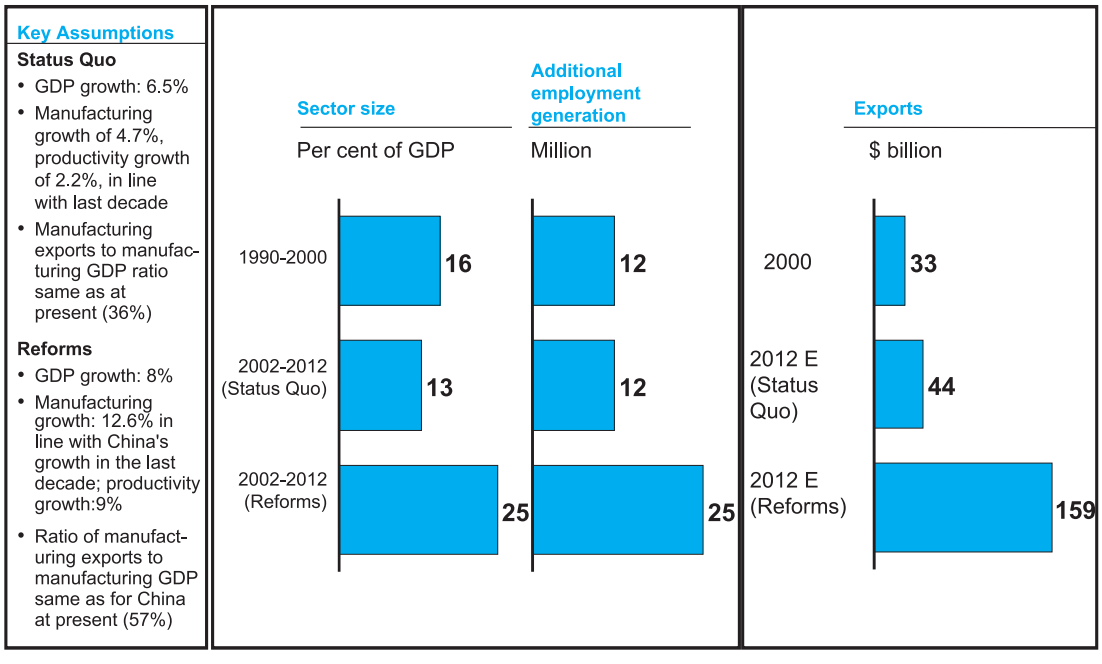
The rest of this chapter describes the reforms that the government will need to carry out, while the next chapter discusses the initiatives that Indian companies can take even under the current policy regime.

The government should initiate a few key reforms

We propose a reform programme consistent with the 13-point reform agenda recommended in an earlier report on the Indian economy (*India: The Growth Imperative*). But specifically to boost

Exhibit 21

MANUFACTURING SECTOR UNDER STATUS QUO AND WITH FULL REFORMS



manufacturing, we emphasise seven key areas of reforms for central and state governments: (1) simplify and reduce indirect taxes; (2) reduce import duties; (3) simplify labour laws; (4) modify the current SEZ policy; (5) enable lower interest rates; (6) eliminate preferential policies for small-scale industry; and (7) reform the power sector. The underlying theme of these reforms should be to match or to surpass China on each dimension, since India and China compete for the same investments and the same export markets.

Simplify and reduce indirect taxes

Although the VAT regime expected to be initiated from the year 2003-04 is a step in the right direction, we do not think that it will yield the desired impact unless four key changes are made.

First, VAT should replace all indirect taxes on goods such as excise, state and central sales tax, octroi and entry tax. The current tax system causes distortions due to the cascading effect of sales tax being applied at each stage of the value chain. In addition, Central Sales Tax (CST), entry taxes and octroi present a barrier to inter-state movement of goods and encourage manufacturers to fragment capacities to serve the market in each state. Second, the current regime of multiple rates across products and states should be replaced with a single rate across products and states to ensure a simple and easy to implement tax regime. Third, the grant of discretionary tax holidays by various states must be discontinued because it creates fragmentation of capacities and results in high costs. Finally, the total incidence of taxes on manufactured goods should be reduced from 25-30 per cent of the retail price to reach a level of 15 per cent of retail price (i.e., the current VAT levels in China) over the next three years. This will help lower prices and boost consumption.

Reduce import duties to a single rate of 10 per cent by 2006

India's current high import duties drive up prices of manufactured products and suppress demand. High import duties also provide the opportunity for inefficient players to survive and for efficient players to make super-normal profits.

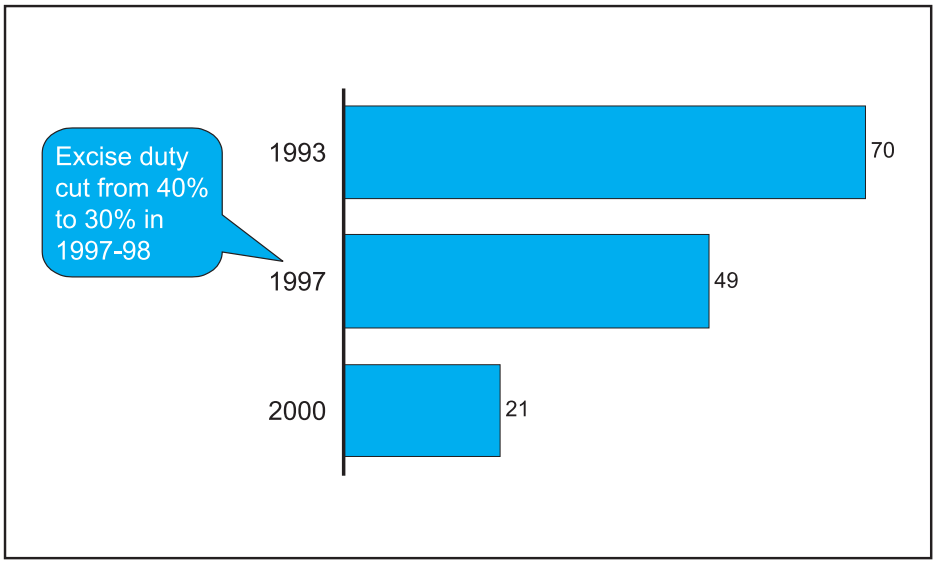
The government should reduce duties on all imports to a single rate of 10 per cent by 2006. This schedule will give domestic manufacturers time to restructure and become competitive and is comparable with the rate of reduction in countries such as China and Brazil over the last decade. A ten per cent import duty will also be in line with China's import duties (expected to average 9 per cent in 2005). Also, a ten per cent duty will offer adequate protection to domestic players.

Our analysis of the elasticity of demand for manufactured products suggests that the reduction in indirect taxes and import duties will have no adverse impact on government revenues. The reduction in taxes and duties will reduce prices by about 20 per cent, resulting in a 60 per cent rise in volumes. Past experience suggests that another powerful effect of reducing taxes is the resulting shift in production from the unorganised to the organised sector (Exhibit 22). This, in turn, results in greater tax compliance and further boosts revenues. These effects will substantially help the government make up for revenue losses from rate reduction (Exhibit 23).

Exhibit 22

IMPACT OF TAX REDUCTION ON SHARE OF UNORGANISED SECTOR - AC EXAMPLE

Share of unorganised sector, Per cent

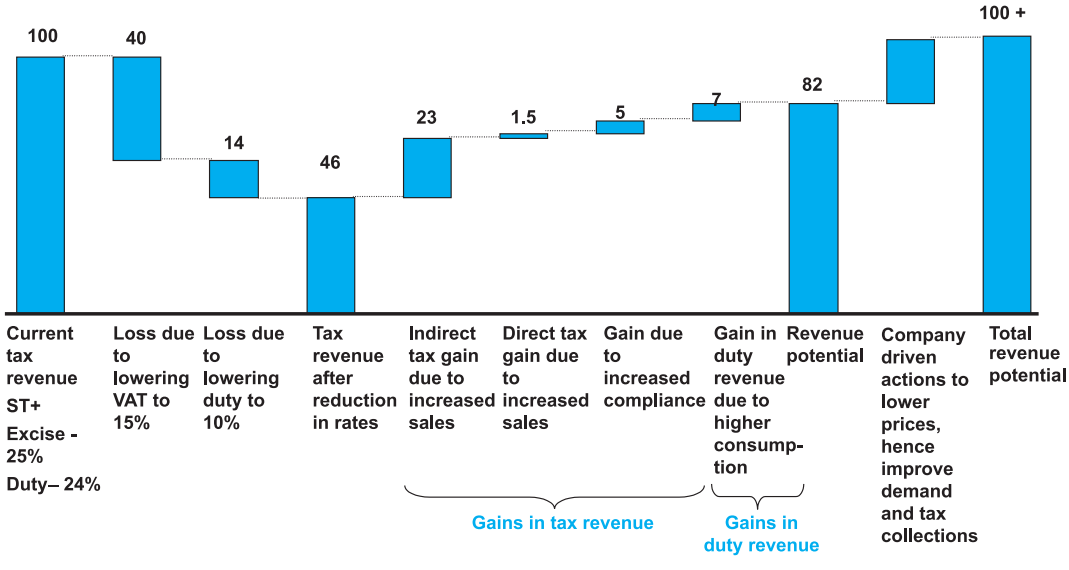


Source: ICRA

Exhibit 23

CHANGE IN TAX REVENUES DUE TO CHANGE IN RATES

Current total tax revenue indexed to 100



Source: CMIE, McKinsey analysis

Simplify labour laws

Constraints on the rationalisation of labour inhibit economic growth and job creation. Companies hesitate to hire labour that they will be unable to retrench if business conditions change. These constraints also reduce India's attractiveness as a manufacturing base for global markets. The effects are strongest in labour-intensive sectors and thus greatly inhibit the potential for job creation.

To address these issues, the government should repeal section 5B of the Industrial Disputes Act, which mandates that companies with more than 100 workers should obtain state government approval to rationalise their workforces. The government should also amend the Contract Labour Act to allow the use of contract labour for all activities – not just activities of a temporary nature.

Modify SEZ policy to permit domestic sales after paying local taxes (and not import duties) and to allow a flexible labour regime

While an SEZ policy has been announced and several SEZs are being planned, our fear is that the current policy may not attract the desired large investments because it does not address two concerns of domestic and foreign investors: access to domestic markets and labour.

We see the need for two key changes in the SEZ policy. First, SEZ based units should be allowed to sell to the Domestic Tariff Area (DTA) on payment both of duties waived on inputs as well as all domestic taxes (excise, sales tax) on output instead of import duties as is currently envisaged. This would also require companies based in the SEZ to bifurcate their accounts for domestic and export sales, as is done in China. Second, SEZ units should have flexible labour laws. The government should, therefore, modify the Industrial Disputes Act and the Contract Labour Act as mentioned earlier. If these Acts cannot be modified for the entire nation, state governments should modify labour laws in their SEZ Acts to allow for the retrenchment of workers and hiring of contract workers within the zone.

Enable lower interest rates through fiscal prudence and reforms to aid the financial sector

While interest rates for five-year loans in India have fallen from over 15 per cent in the mid-90s to about 8 per cent in 2002, the aspiration should be to further reduce rates to about 5-6 per cent. One of the causes of high interest rates at present is India's high fiscal deficit. The government therefore needs to take urgent steps to reduce the consolidated fiscal deficit. Reforming the power sector alone can reduce India's fiscal deficit by 1 per cent of GDP. McKinsey's work on the Indian economy (*India: The Growth Imperative*) shows that the deficit can be reduced by more than 4.5 per cent of GDP (the deficit at present is 10.1 per cent of GDP) by introducing various reforms such as levy of user charges and PSU privitisation.

In addition, to help banks address non-performing assets (NPAs) and to free up capital locked in unprofitable ventures, the government should simplify the process for restructuring and closure of bankrupt units. Three current impediments to the swift restructuring of companies are: labour laws that prevent retrenchment (discussed earlier), an urban land ceiling act that prevents the sale of

surplus land and the requirement of the Board for Industrial and Financial Reconstruction (BIFR) for restructuring plans based on consensus between all concerned parties (shareholders, creditors, management, workers, etc.). The government should strengthen bankruptcy laws and allow swift restructuring or closure of bankrupt units.

Eliminate preferential policies for small-scale players

As mentioned earlier, India's Small Scale Industry (SSI) framework encourages firms to remain small and unproductive. Reservations and fiscal incentives to the small-scale sector allow unproductive players to exist and even to compete successfully against more competitive players. To address this issue, the government should remove all small-scale reservations and should equalise all taxes and levies on companies in a sector, regardless of their size. These reforms can be started with the top 60 sectors reserved for SSI that account for over 80 per cent of India's small-scale sector output.

Carry out power sector reforms

India's power sector problems are well known and have been acutely highlighted in the recent power crises in Maharashtra and other parts of the Western region. If India is to emerge as a truly world-class manufacturing location, cheap and reliable power supply is an imperative. To this end, the government should carry out power sector reforms focused on disaggregating SEBs into separate generation, transmission and distribution entities; privatising the sector starting with distribution companies; and removing the high level of cross-subsidies that operate against industrial consumers. In addition, generators should be allowed to sell power directly to consumers with demand greater than 0.1 MW.

* * *

Almost all items highlighted in the reform agenda have been discussed many times amongst business leaders and with the government. Learning from China, one of the key changes that the Indian government should make is increasing its responsiveness to business needs. Holding ministers and government officials responsible for key economic targets such as GDP growth and FDI inflows can achieve this goal. To begin with, the more progressive state governments can implement such measures. This will induce other states to follow suit as they compete for investments with progressive states.

While the policy reforms outlined in this chapter are critical, there is also a lot that Indian companies can do to compete under the current policy regime. The next chapter outlines the actions that companies can take. ■

CHAPTER 5

Implications for Indian companies

There is a sense across Indian industry that India is fast losing the manufacturing race to China. While the current duty structure has prevented a significant Chinese onslaught on the domestic market, Indian exporters are facing increased competition from China in multiple sectors. But all is not lost. Fortunately world trade is large enough for both to grow. There is room for both India and China to become the manufacturing hubs of the world.

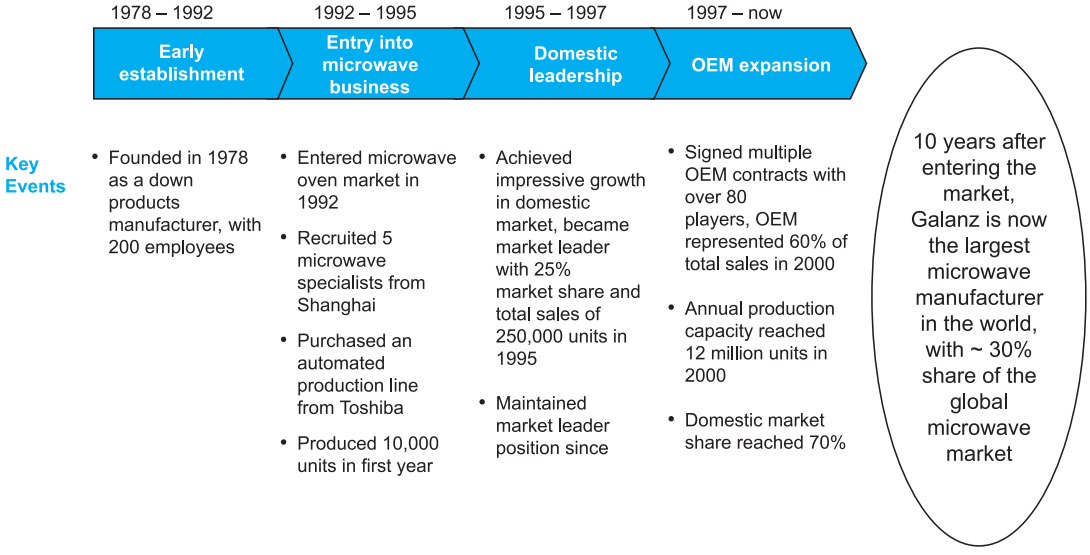
India's task of matching the efforts of Chinese companies and boosting its own exports is daunting but doable.To emerge successful, even under the current policy regime, Indian companies need to adopt a new mindset and reshape their strategies to achieve aggressive domestic and international growth.

We think two main steps need to be taken. First, Indian companies need to grow the domestic market through lower price-points. This will require significant productivity improvements, re-engineering of products, sourcing from China (if relevant), design of new products and improved marketing effectiveness. Second, Indian companies need to see the world (including China), and not just India, as their market. In fact, our analysis suggests that Indian companies can be competitive in exports in almost 75 per cent of the manufacturing sectors. In this regard, Indian companies have a lot to learn from Chinese companies such as Galanz and Haier, with their significant focus on overseas markets (through exports and by establishing production bases in other countries) and the resulting tremendous success (Exhibits 24 and 25). The export mindset of these companies has translated into a large share of exports in total sales and large shares of key Western markets. Haier, for instance, has been able to capture 30 per cent of the US compact refrigerator market within three years of its entry into the market.

China's export mindset in labour-intensive industries is even more striking. The team visited one toy factory which exports all of its output of close to $100 million. Its largest customers are companies such as Mattel and McDonald's. One footwear company in south China serves as an OEM for companies such as Nike, Adidas and Reebok. It employs more than 80,000 workers and exports about 90 per cent of its output.

Exhibit 24

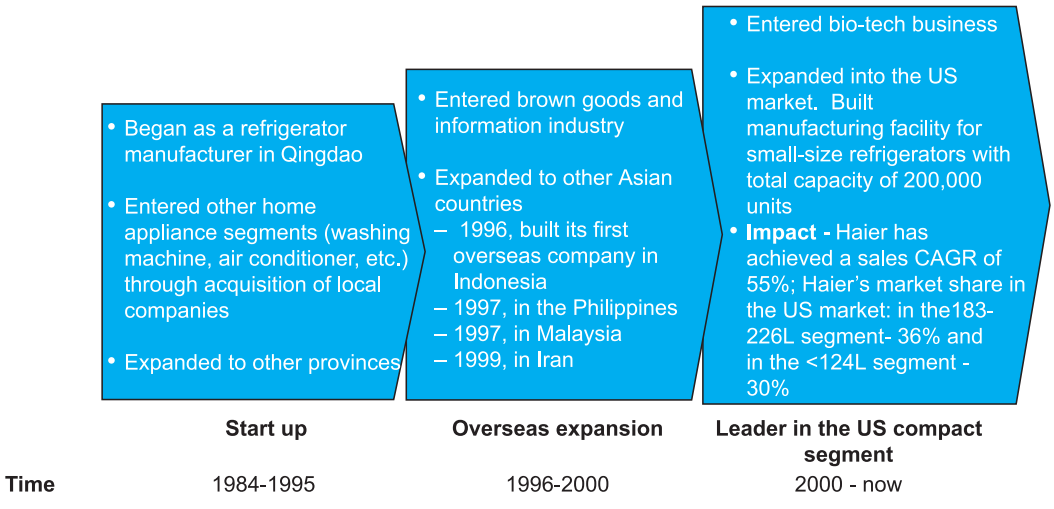
CHINESE EXPORTS MINDSET – GALANZ CASE STUDY



Source: Literature search, McKinsey analysis

Exhibit 25

CHINESE EXPORTS MINDSET – HAIER CASE STUDY



Source: Literature search, company website

Our discussions with leading companies across sectors have revealed that their drive for exports has historically been low and that they have neither the understanding of global markets, nor the export marketing capabilities to prise open large, global markets.

Indian manufacturers will need to take concerted action immediately if they are to strengthen their grip on the domestic market and to build exports. Exactly how they act will depend on the sector in which they operate (Exhibit 26). But they will need to take some combination of the following sets of actions:

- **Stimulate domestic demand** by targeting lower price-points through a cost structure consistent with lower prices.
- Take immediate steps to boost exports.
  - Play catch up with China to grow exports in **labour intensive** industries (apparel, footwear, etc.) by increasing export targets, benchmarking labour productivity to world-class levels and developing marketing capabilities.
  - Build IT-like dominance in **skill intensive** industries (automotive, pesticides, pharmaceuticals, etc.) and grow exports in these sectors, including to China.
  - Grow exports, including to China, in areas such as steel and aluminium which depend on **raw materials** that India has in abundance.

Exhibit 26

ASSESSMENT OF EXPORT COMPETITVENESS ACROSS SECTORS

	Labour intensive	Skill intensive	Raw material based	Capital intensive	Agriculture based
% Indian Output	6	40	24	23	7
Summary of assessment	• China currently far ahead • India can play catch up	• Advantage India, including tapping China's market	• Advantage India in sectors where raw material is plentiful	• Advantage China	• Advantage India
Key Sectors	• Readymade garments • Footwear • Toys & sports goods • Cotton cloth • Synthetic fabrics • Tobacco products	• Passenger cars/ MUVs & CVs • Telecom equipment • Consumer electronics & computer hardware • Auto ancillaries • Drugs and pharmaceuticals • Engines • Pumps & compressors	• Paper • Aluminium & products • Steel & products • Tyres & tubes • Soaps & detergents • Other non-ferrous metals	• Plastic products • Organic chemicals • Polymers • Glass, glassware & ceramics • Inorganic chemicals	• Poultry & meat products • Beer & alcohol • Dairy products • Vegetable oils and products • Bakery and milling products • Sugar • Coffee

- Evaluate whether or not to source from China in **capital-intensive** industries (e.g., plastic products, organic chemicals, polymers), where only a few Indian players that are able to set up projects at low capital cost can win.
- Significantly grow exports, including to China, in **agriculture-based industries** where India has an intrinsic advantage, such as poultry and dairy products.

Grow the domestic market

India's domestic market for manufactured products is currently very small, only about one-fourth of the Chinese domestic market. Apart from income differences, a key reason for the small market size in India is that the prices in India are much higher than those in China. These higher prices, in turn, are caused by the failure of many Indian companies to achieve international operational benchmarks in per unit operating costs, days of inventory and salesforce productivity.

Indian companies can use several operational levers to significantly reduce costs and, thus, lower prices and boost demand (Exhibit 27). McKinsey experience across industries suggests that costs could be reduced by 20-30 per cent through operational improvements. If this improvement is passed on to customers in the form of lower prices, demand could take off. In the past, the introduction of low-priced products has stimulated demand (Exhibit 28). This is also consistent with our analysis of price elasticity of demand across several products (colour televisions, motorcycles, refrigerators, etc.). This shows that a 30 per cent reduction in prices results in a doubling of volumes.

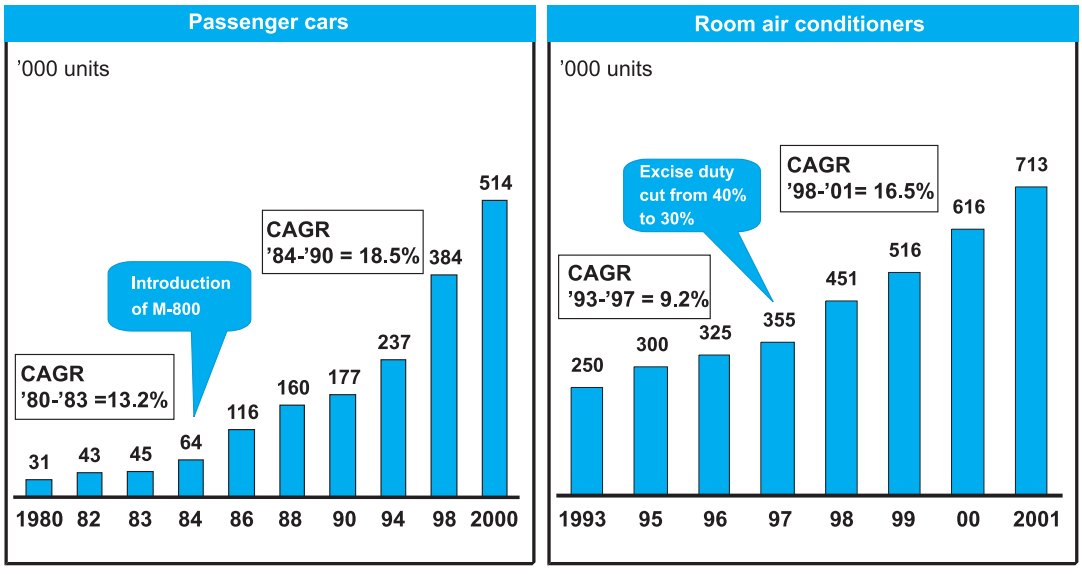
Exhibit 27

OPERATIONAL IMPROVEMENT LEVERS

Lever	Illustrative actions
1. Transparent up-front target setting	• Setting "right" target level (cost comparison vs. content) including optimal baseline • Definition of product value proposition/profile
2. Design-to-cost/ product redesign	• Simplification/integration/redesign of parts and modules, e.g., reduce number of parts, use different material, optimise specifications
3. Commonality across product families/ platforming	• Economies of scale • Standardisation of parts/scaling of parts
4. Purchasing/ optimisation of supply base	• Sourcing/supplier productivity improvements • Improved purchasing terms based on increased transparency (e.g., benchmarking, Linear Performance Pricing)
5. Lean value chain	• Optimisation of all costs related to transformation of raw materials into finished goods including transportation, warehousing/storage, and handling
6. Lean own operations	• Manufacturing-related activities to improve own operations
7. Content adjustment	• Product content optimisation, e.g., through – Matching product with what customers need – Translation of desired product attributes to content
8. Capital cost optimisation	• Optimal debt-equity structure • Reduction in project completion times • Elimination of lazy capital • Optimization of design & purchase of capital equipment

Exhibit 28

IMPACT OF LOWER PRICE POINTS ON MARKET GROWTH



Source: ACMA, ICRA, Francis Kanoi

In order to identify the appropriate operational improvement lever, companies should study the operational sources of labour productivity differences with world-class companies. For example, in the automotive industry, based on an assessment of productivity gaps (Exhibit 29), lean operations is a key improvement lever, with specific actions including improvement in design for manufacturability, improvement of the Organisation of Functions and Tasks (OFT) and the reduction of surplus labour through a voluntary retirement scheme.

In addition to operational improvements, Indian companies also need to improve their marketing and product development efforts. In the area of sales and marketing, made complacent by the supply constraints that prevailed in most industries until a few years ago, Indian manufacturing companies postponed the sales and marketing process improvements that had already been made by most of their counterparts in developed markets. As a consequence, the sales processes of most companies continue to emphasise channel partners instead of retail customers. Also, companies focus almost entirely on gaining market share and spend very little time on customer satisfaction and channel profitability, which results in problems such as low customer satisfaction levels and low levels of channel loyalty, which in turn erode future sales.

Best-in-class sales efforts require one or both of two related actions: channel effectiveness and key account management (KAM). These initiatives can allow companies to grow their market share and stimulate demand.

In the area of product development, Indian companies need to build expertise in designing new products for the Indian market. The companies that have successfully done so in the past have seen

volumes take off as a result.

Several Indian companies have already undertaken some of the actions recommended above with corresponding results. Nirma enjoyed high growth and high ROCE and drove volume expansion in the detergents market as a result of its low-cost strategy. TELCO, TVS Motors, Bajaj Auto and Mahindra & Mahindra have indigenously designed automobile products at lower than international costs. These actions suggest that market expansion through company level actions is clearly possible.

Play catch up with China to grow exports in labour-intensive industries

Labour intensive sectors include apparel, footwear, toys and cotton fabrics. Together they account for about 6 per cent of India's manufacturing output.

In these sectors, China is currently far ahead of India in the world market. For example, in readymade apparel, China's exports are $27 billion in value or almost 20 per cent of the world trade of $140 billion, whereas India has less than a 4 per cent share (Exhibit 30). One key bottleneck that Indian companies face in these sectors is their low labour productivity in comparison with the world's best plants. For example, in apparel, India's productivity is 16 per cent of the productivity of US plants and about 40 per cent of the productivity of Chinese plants (Exhibit 31).

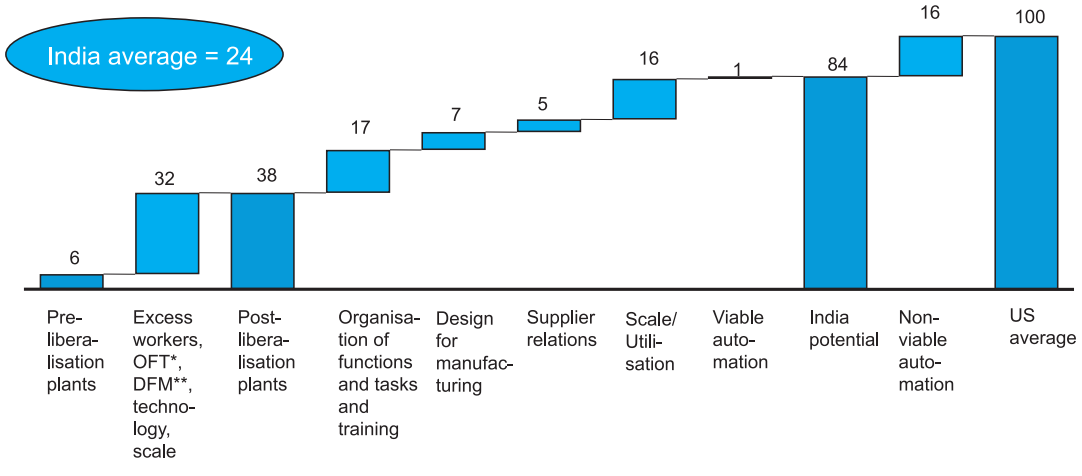
Indian companies do, however, have the intrinsics (such as low cost labour) that could serve as a sound platform for export success. They should leverage the trend of offshoring to low cost countries

Exhibit 29

AUTOMOTIVE EXAMPLE

SEVERAL SOURCES OF PRODUCTIVITY GAPS

Equivalent cars per equivalent employee, Indexed to US average in 1998 = 100



* Organisation of functions and tasks

** Design for manufacturing

Source: MGI, *India: The growth imperative*

Exhibit 30

ILLUSTRATIVE ACTIONS FOR EXPORTS IN LABOUR INTENSIVE SECTORS

$ Billion, 2000

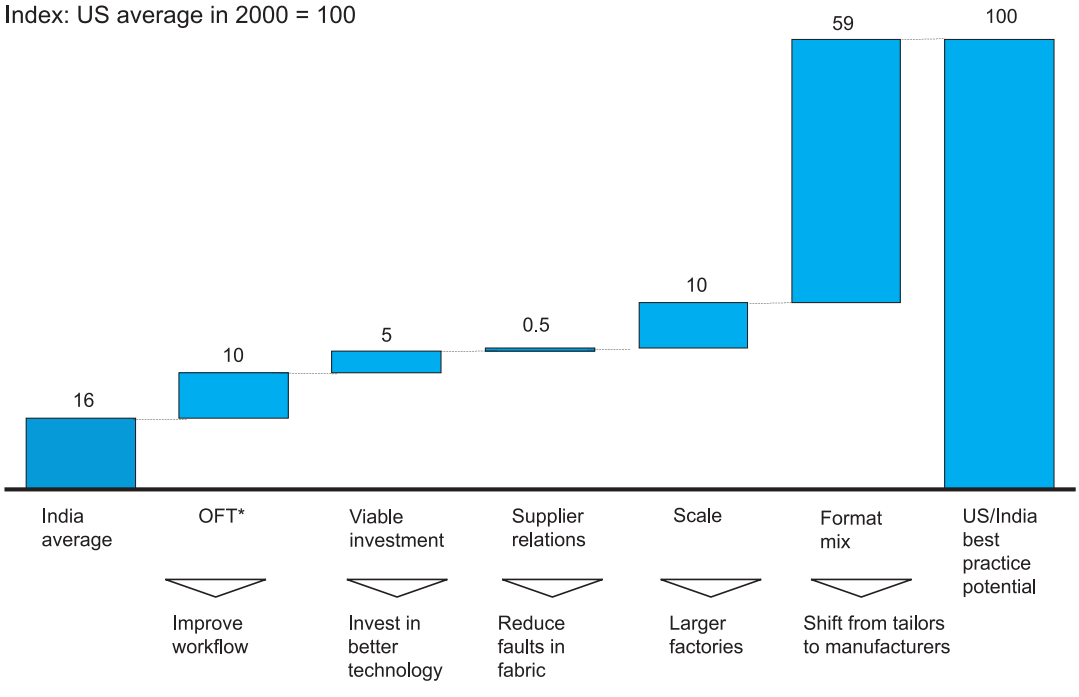
Sector	Current exports: China	Current exports: India	World trade	Actions required
• Readymade garments	27.3	5.30	141	• Improve labour productivity • Increase international marketing efforts • Tie up with mills to source fabric and focus on high-trade segments such as jerseys and jackets
• Footwear	8.7	0.60	35	• Improve labour productivity • Co-invest in common infrastructure: components, effluent treatment, etc. • Invest in design studios
• Toys & sports goods	7.8	0.06	28	• Improve labour productivity and enhance design skills • Tie up with foreign toy majors such as Mattel to gain expertise
• Cotton cloth	11.3	3.90	24	• Build capability to compete in premium cotton segments • Devise a strategy to sell to the attractive Chinese market
• Synthetic fabrics	2.2	0.50	23	• Improve productivity at the weaving stage • Set up large scale weaving mills
• Tobacco products	0.3	0.20	19	• Leverage current low cost manufacturing in large export markets

Source: CMIE (India Trades)

Exhibit 31

OPERATIONAL REASONS EXPLAINING THE PRODUCTIVITY GAP IN APPAREL

Index: US average in 2000 = 100

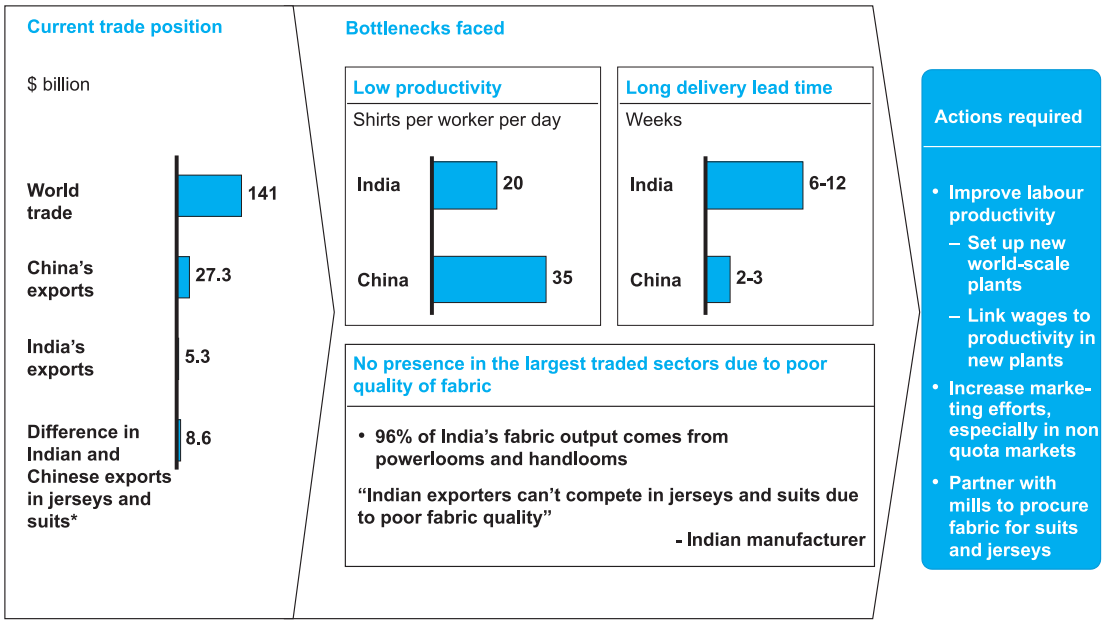


* Organisation of functions and tasks

Source: MGI, *India: The growth imperative*

Exhibit 32

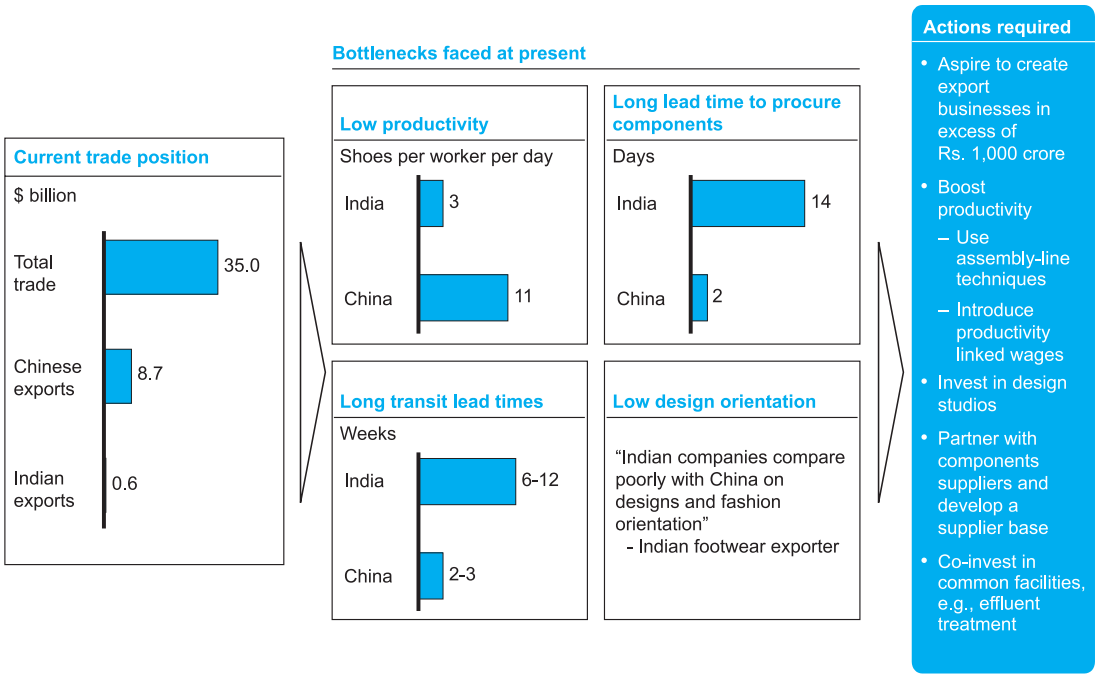
ILLUSTRATIVE ACTIONS FOR INDIAN GARMENTS MANUFACTURERS



* Suits and jerseys are the largest traded segments in apparel
Source: CMIE (India Trades), interviews, plant visits

Exhibit 33

ILLUSTRATIVE ACTIONS FOR INDIAN FOOTWEAR COMPANIES



to achieve growth. An evaluation of sectors that account for over 85 per cent of all labour-intensive sector output shows that India can catch up with China in such sectors. India should aspire for up to $55 billion in exports from labour-intensive sectors, up from the current $11.6 billion. This will require that companies aspire to build large export businesses, benchmark labour productivity to world-class standards in their new plants and build design and overseas marketing capability ahead of demand (Exhibits 32 and 33).

There are examples of Indian players in labour intensive sectors that are making the right moves. A leading leather footwear manufacturer is exploring a joint venture with an Italian components manufacturer and is taking steps to modernise its plant and raise productivity as well. One garments manufacturer has built an export business of over Rs.400 crore through a strong focus on marketing and by tightly managing operations to ensure high labour productivity.

Build IT-like dominance in skill-intensive manufacturing industries

Skill-based sectors such as automobiles, telecom equipment, consumer electronics, auto components and pharmaceuticals currently account for about 40 per cent of India's output. India has an advantage in such sectors due to its large pool of talented engineers and the competitive nature of its domestic sector, which has helped improve performance. Based on our evaluation of over 85 per cent of such sectors, it is apparent that India can export both to China as well as to the rest of the world and can grow exports from its current $5 billion to about $24 billion by 2012. Achieving this growth will require targeted actions by companies (Exhibits 34 and 35).

Exhibit 34

ILLUSTRATIVE ACTIONS FOR EXPORTS IN SKILL INTENSIVE SECTORS

$ Billion, 2000

Sector	Current exports: China	Current exports: India	World trade	Actions required
• Passenger cars/ MUVs & commercial vehicles	0.08	0.20	348	• Devise export strategies for sales to India-like markets • Tap the opportunity presented by China
• Telecom equipment	0.06	Negligible	201	• Limited opportunity – Indian domestic market small and companies not developed
• Consumer electronics & computer hardware	9.60	0.20	127	• Catalyse formation of domestic components supply industry or source key components from China
• Auto ancillaries	0.90	0.30	127	• Leverage low cost design and manufacturing capabilities to capture OEM and after-markets in the West • Devise JV based strategy to tap the China market
• Drugs & pharmaceuticals	0.60	0.90	87	• Move from cost focus to innovation focus • Build international marketing teams
• Engines	0.10	0.05	46	• Leverage low capital based plants to offer low volume-high variety products • Develop ability to manage global supply chain for engines • Build sourcing and engineering service capability as well
• Pumps & compressors	1.00	0.10	39	• Similar to engines
• Domestic electrical appliances	2.60	0.02	36	• Catalyse creation of a strong supplier base or import components • Improve labour productivity • Invest in design and in supply chain management

Source: CMIE (India Trades)

Exhibit 35

ILLUSTRATIVE ACTIONS FOR EXPORTS IN SKILL INTENSIVE SECTORS (CONTINUED)

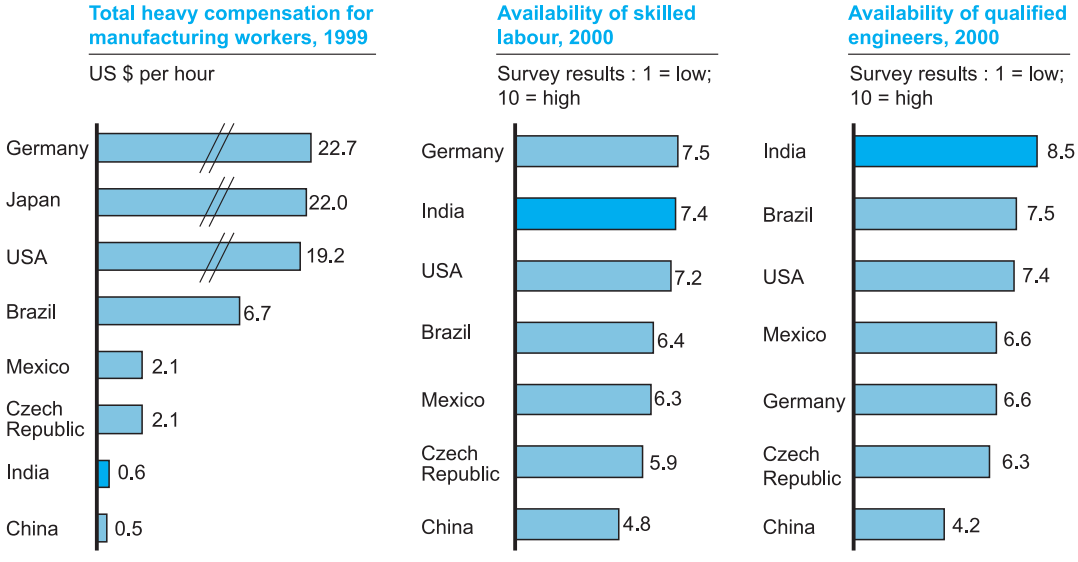
$ Billion, 2000

Sector	Current exports: China	Current exports: India	World trade	Actions required
• Machine tools	0.4	0.08	35	• Build marketing presence overseas • Develop design capabilities • Develop strategy to sell to the Chinese market
• Motors & generators	0.12	0.03	27	• Increase international marketing focus
• ACs & refrigerators	0.8	0.02	26	• Build design capability and scale • Import key inputs • Target SE Asian markets and Middle East
• Cosmetics & toiletries	1.0	0.60	21	• Raise export aspirations and increase international marketing effort • Invest in formulation expertise creation
• Dyes & pigments	0.8	0.50	18	• Utilise strong process innovation capability to build low-cost position • Design low cost plants, leveraging engineering skills
• Pesticides	0.4	0.20	11	• Selectively import raw materials • Systematically target regulatory clearances
• Two & Three wheelers	0.1	0.07	9	• Increase export aspirations and raise marketing efforts • Launch product-development focused on international markets • Devise China entry strategy
• Paints & varnishes	0.1	0.01	7	• Acquire/build operations in Asian markets, including China • Leverage formulation and supply chain skills across markets

Source: CMIE (India Trades)

Exhibit 36

COMPARISON OF SKILLED LABOUR AND ENGINEERS



Source: IMD world Competitiveness Yearbook 2001

The basis for India's advantage in these sectors is low costs at the equipment design stage, at the manufacturing stage and the availability of low-cost, high-skilled labour (Exhibit 36). Achieving a significant growth in exports in these sectors will require that Indian players set aggressive exports targets and select strategies that enable them to leverage design and engineering skills. There is evidence that this is already happening in sectors such as pharmaceuticals where Indian players have built strengths in process R&D of molecules (that have helped them emerge as important players in the generics segment). In addition, some companies are beginning to build strengths in the areas of research and marketing. These strengths along with shifting global trends such as new drug discovery technologies and cost containment pressures will open up opportunities for India. DRL is an example of a company that has successfully positioned itself to capture these opportunities by leveraging its strengths in R&D (Exhibit 37).

Indian pharmaceuticals players can, thus, seek to build dominance over China in export markets as well as tap the opportunity to sell in the large Chinese domestic market, both through production in China and through exports from India. China's domestic market was $12 billion in 2000, whereas India's was about $6 billion. Imports of drugs and pharmaceuticals into China amounted to $627 million in 2000. Players such as DRL and Ranbaxy have already started tapping this opportunity, having established facilities in China to sell to the Chinese domestic market.

The automotive industry is another example in this category. Here, leading Indian players have built several strengths: ability to manufacture products at low costs and to high quality standards, design products and components, and manage low volume, high variety manufacturing operations in a

Exhibit 37

DRL EXAMPLE

ILLUSTRATIVE ACTIONS FOR INDIAN PHARMA COMPANIES

Challenges/opportunities

- Changing patent regime in 2005
- Low-cost, high-skill chemist base

Illustrative actions

- Identified R&D and innovation as future growth areas of company (R&D spend is 12% of sales today)
- Carefully selected diabetes as research and development focus based on strategic advantages such as knowledge of chemistry for particular therapeutic areas
- Leveraged low cost regions in carrying out pre-clinical trials to reduce total R&D expense
- Attracted high quality talent from Indian and international research organisations
- Entered into a network of alliances with several prominent research institutions, e.g., National Cancer Institute (NCI), USA
- Entered the US generics market in the mid to late 90s to ensure sustainability of growth in the wake of WTO regulations
- Developed a US front-end and acquired subsidiaries of international firms such as BMS Laboratories

Impact

- R&D
  - 12 molecules in pipeline
  - 5 molecules in clinical trials
  - 2 molecules licensed to Novo Nordisk and one to Novartis
- Sales grew at 42% CAGR from 1997 to 2002 to reach $350 million

Source: Press searches

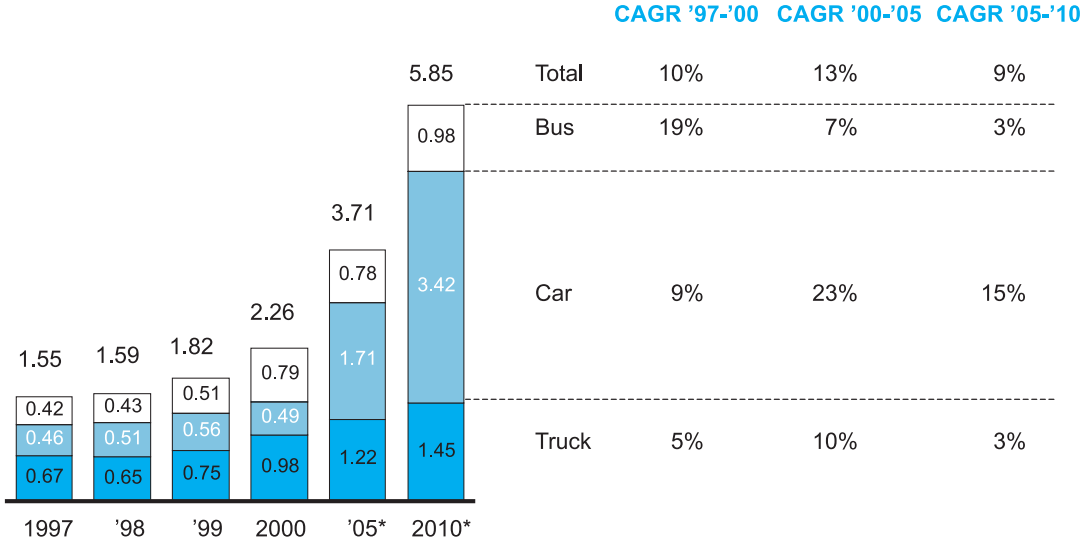
timely and cost effective manner. They have done this on the back of strong engineering skills and low cost skilled labour. These players should now prepare to capture both the overall global sales opportunity and the China market opportunity. Automotive OEMs around the world are facing a growing price-cost squeeze and see limited additional opportunity from conventional cost reduction measures such as re-negotiation with existing suppliers. They are likely to increase global sourcing from low cost locations such as India. Amongst various automotive components, those with relatively stable technologies (e.g., traditional electricals, hardware items, non-critical castings) are suited to global sourcing. Apart from serving OEMs, Indian players can also serve the large after-market for these components.

The Chinese automotive market itself presents an interesting opportunity for Indian players. Years of protection of domestic manufacturers and controls on private ownership of vehicles have resulted in a relatively less developed automotive supplier industry in China. However, tariff reductions driven by China's accession to the WTO and removal of ownership controls will drive rapid growth in the Chinese automotive market, opening up opportunities for Indian suppliers (Exhibit 38). Some Indian manufacturers have already started supplying to Chinese automotive companies. Interestingly, these Indian suppliers are price competitive on these sales and make adequate margins, despite paying an import duty of 25 per cent in China. Leading companies such as Bharat Forge, Lucas TVS and Sundaram Fasteners have already started building or are planning to build strong positions in large export markets such as the USA and China. MNCs such as Ford and Cummins are evaluating supplies to their Chinese divisions.

Exhibit 38

CHINESE AUTOMOTIVE MARKET GROWTH

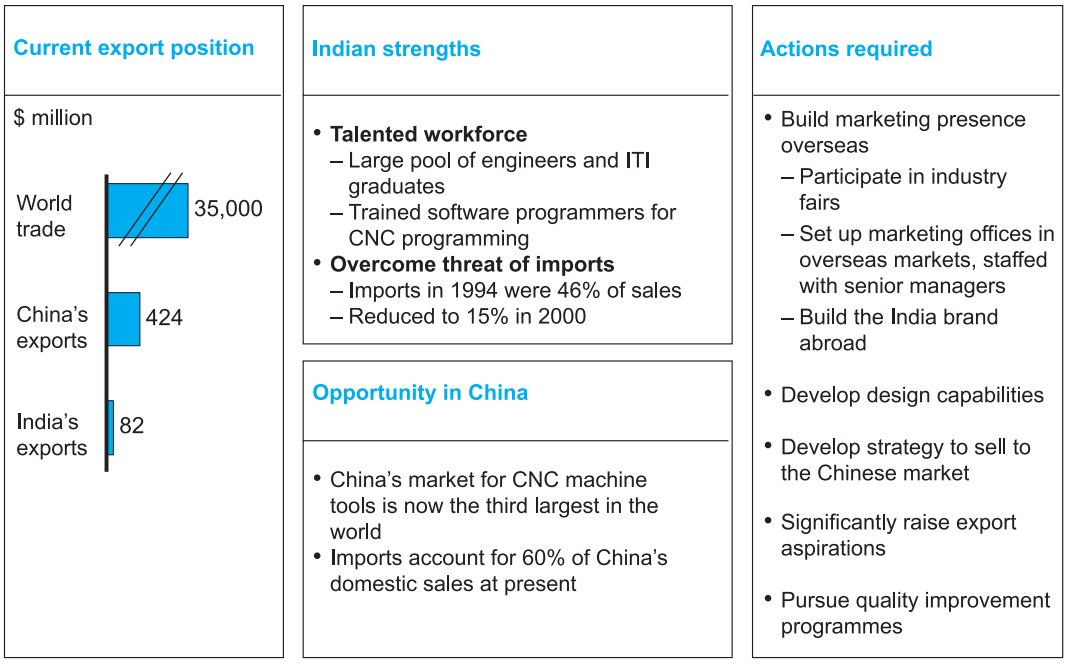
Vehicles sold, million units



Source: China Automotive Industry Yearbook, China Auto Industry Information Network, literature search, McKinsey analysis

Exhibit 39

ILLUSTRATIVE ACTIONS IN CNC MACHINE TOOLS



As in the automotive sector, India has an opportunity in CNC machine tools, where China is now the world's third largest market. In addition, 60 per cent of China's requirements are met through imports. Indian players are well positioned to tap this opportunity since they have good engineering and technical talent as well as improved product quality and efficiency. This is reflected in the reduction of imports into India from almost half of total domestic sales in 1994 to about 15 per cent in 2000. Tapping this opportunity will require that Indian players significantly raise their marketing presence in overseas markets (Exhibit 39).

Increase exports in raw material based industries where India has an advantage

Raw material based sectors include paper, aluminium and steel products, and tyres and tubes, which account for close to 25 per cent of India's output. The relative competitiveness of these sectors is determined by raw material advantage. For example, India has an advantage in sectors such as aluminium and steel because it has an abundant supply of good quality aluminium and iron ore, whereas China has the advantage in sectors such as phosphatic fertilisers since it has reserves of the key raw material, rock phosphate (Exhibit 40).

In some sectors, such as paper, both countries are at a disadvantage and neither is likely to become a major exporter. Both countries face wood pulp shortages that are likely to continue, and low-cost labour offers relatively moderate advantages since the production of paper is not labour intensive.

Exhibit 40

ILLUSTRATIVE ACTIONS FOR EXPORTS IN RAW MATERIAL BASED SECTORS

$ Billion, 2000

Sector	Current exports: China	Current exports: India	World trade	Actions required
• Paper	0.1	0.9	91	• Limited opportunity due to shortages of wood pulp in both countries and because advantage due to cheap labour is relatively moderate
• Aluminium & products	1.5	0.6	54	• Increase export aspirations and invest in international marketing teams especially in Asian countries
• Steel & products	4.6	2.1	24	• Further reduce conversion costs to emerge as lowest cost players • Devise strategies to tap the China flat steel market
• Tyres & tubes	3.4	0.9	24	• Further hone expertise in radial technology • Focus on capturing large share of cross-ply markets
• Soaps & detergents	1	0.3	7.5	• Increase export aspirations • Tie up with Western manufacturers to source from India
• Other non-ferrous metals	3.6	0.2	NA	• Leverage ability to build lower cost plants and keep operating costs low to build export markets • Secure raw material sources and be located close to port

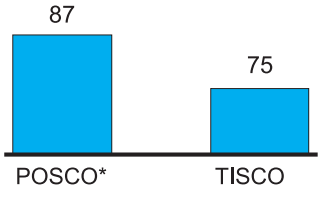
Source: CMIE (India Trades)

Exhibit 41

TATA STEEL CASE EXAMPLE

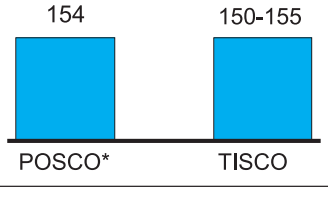
Operating costs (hot metal stage)

$/tonne



Operating costs (HR stage)

$/tonne



Key initiatives / policies

- Aspiration and mindset to become the world's lowest cost producer of steel
- Substantial cost reduction and productivity improvement in the last ten years
- Sustained investments in a 20 year long modernisation programme (1980-99); integrating up the value chain
  - Cold Rolling Mill
  - Galvanising Line
- Divested non-core assets to reduce debt and fund capital expansion in core businesses

* POSCO – Pohang iron and steel company (South Korea)

Source: Analyst reports, McKinsey analysis

In steel, India currently has the advantage of having an abundance of raw material available (iron ore) and the existence of mature, experienced domestic players. Some Indian companies such as TISCO have also built globally competitive low-cost positions in recent years (Exhibit 41). One of the drivers of TISCO's low-cost position has been the availability of low cost raw material (iron ore) and recent reductions in conversion costs. The company is now taking steps to consolidate its low-cost position by driving down its conversion costs still further.

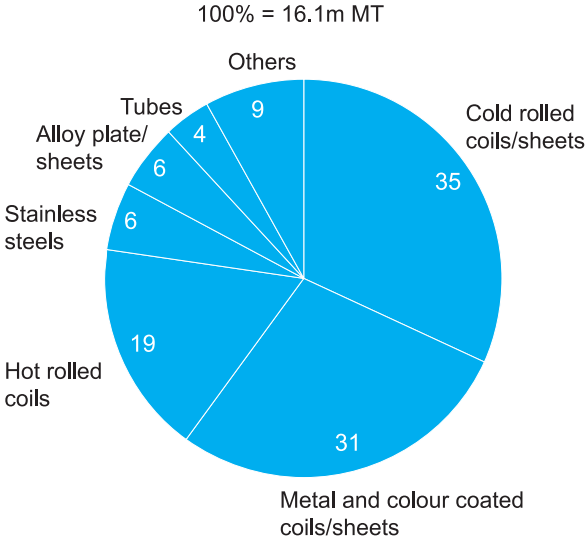
There is a large opportunity in China's large and fast-growing steel market because its industry is characterised by insufficient capacities for and poor quality of flat products. As a result, a majority of China's steel imports are of these high-value flat products (Exhibit 42). Indian steel majors have strong capabilities in manufacturing flat products and have the experience of supplying to global majors in the automotive industry based in India. Best practice companies should, therefore, aim to tap the Chinese market for flat steel and significantly boost exports to China. They will need to build a focused China strategy, cultivate close customer relationships and focus on quality through key account teams.

As in steel, companies in sectors where India has a raw material advantage (e.g., aluminium, tyres and tubes) should significantly boost exports to China as well as to the rest of the world. This can result in a growth of Indian exports in such sectors (of which we studied close to 90 per cent) from the current $2 billion to $10.5 billion by 2012. On the other hand, companies in sectors where China has the raw material advantage (e.g., phosphate-based chemicals) should explore opportunities to source from China.

Exhibit 42

STRUCTURE OF CHINESE STEEL IMPORTS

Per cent, 2001

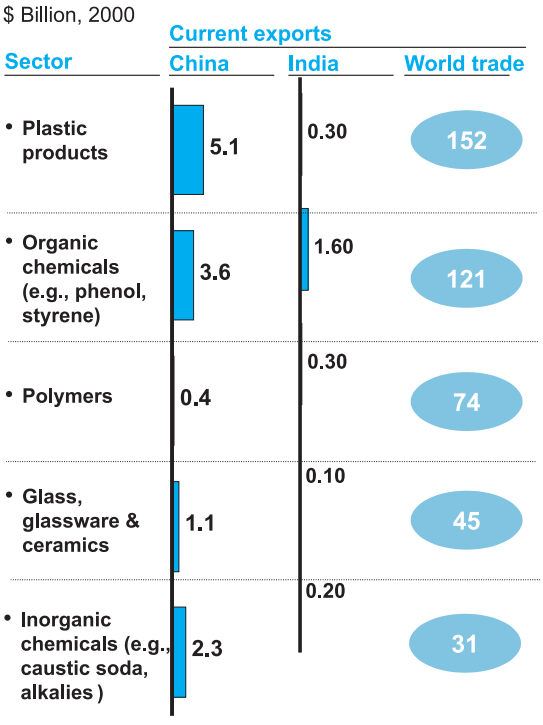


Source: McKinsey analysis

Exhibit 43

ILLUSTRATIVE ACTIONS FOR EXPORTS IN KEY CAPITAL INTENSIVE SECTORS

$ Billion, 2000



Potential actions required

- Manage project costs carefully; aspire to set up plants at 30-40 per cent lower than Western manufacturers
- Plan capacities carefully to ensure high utilisation rates
- Manage cost of capital by raising debt at international rates and carefully structuring the debt-equity ratio
- Tightly manage project construction and set ambitious targets on completion times
- Tap short-term opportunities that exist in some large markets due to supply-demand gaps (e.g., for polymers in China)

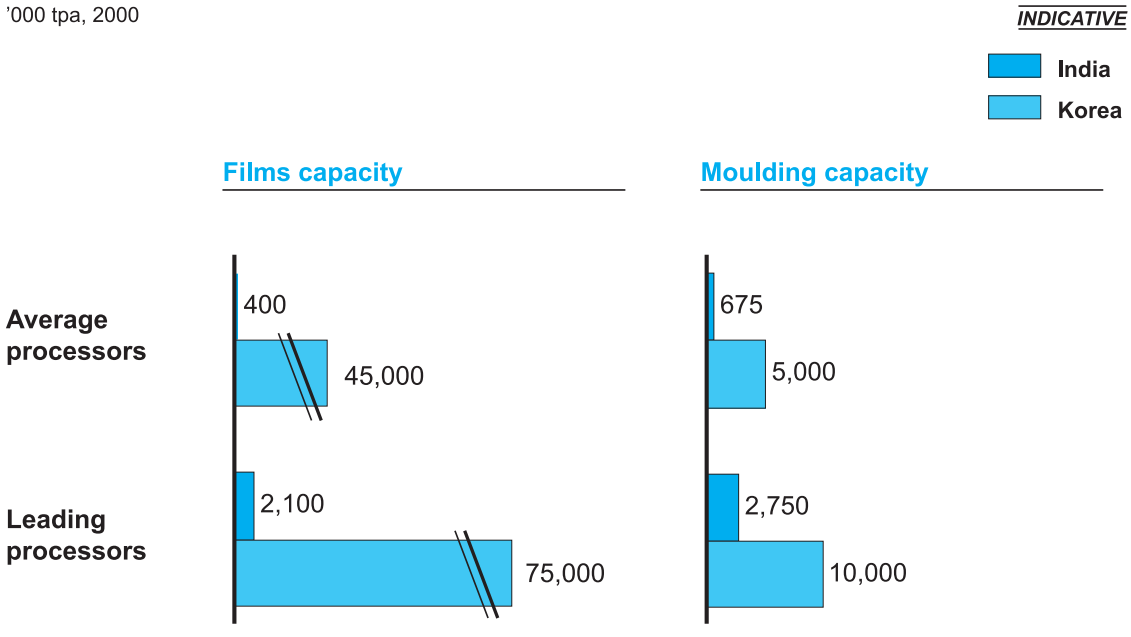
Source: CMIE (India Trades)

Exhibit 44

LOW CAPACITIES IN INDIA – PLASTIC PRODUCTS EXAMPLE

'000 tpa, 2000

INDICATIVE



Source: Interviews, McKinsey analysis

Evaluate sourcing from China in capital-intensive industries

Sectors in this group include plastics, organic chemicals and polymers (Exhibit 43). These sectors together account for about a quarter of the total manufacturing output in India. Indian companies in these sectors are characterised by far lower capacities than world-scale (Exhibit 44). China currently has a slight advantage in such sectors due to its lower capital costs.

However, cost of capital is only one of the levers that determine the success of projects in these sectors. Other levers include location of the plant, cost of the capacity installed, time taken to construct the plant, structure of utilities and utilisation levels (Exhibit 45).

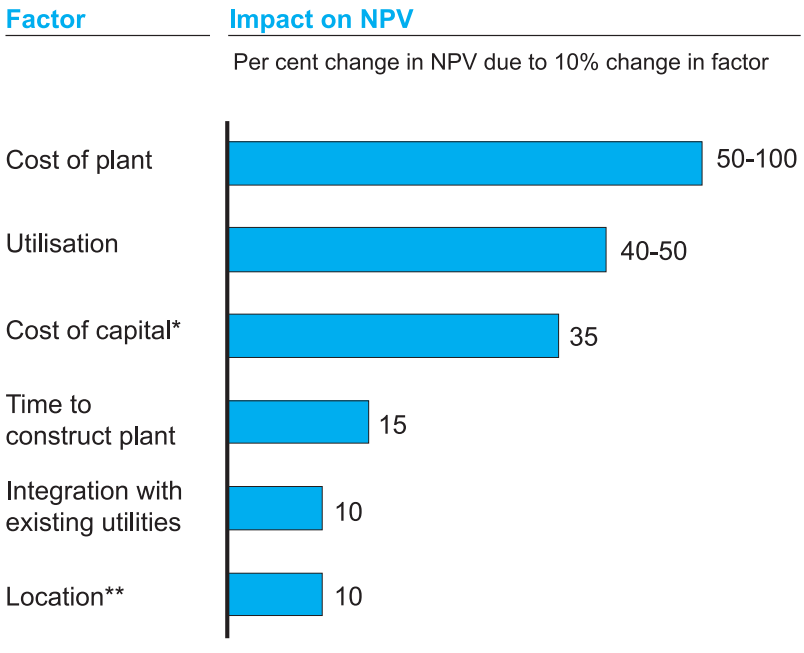
Therefore, Indian companies in capital-intensive sectors could be competitive if they achieve world-class standards in all these levers. For example, some companies in the chemicals sector have been able to set up their plants at a fraction of the cost that a Western manufacturer would incur and have thus achieved a high degree of competitiveness. Companies in capital-intensive sectors should also aggressively manage cost of capital and efficiently manage capital projects to keep capital costs low. For example, Reliance has been successful in this sector due to its ability to access capital at international rates, complete projects on time and build plants at a much lower cost than Western manufacturers (Exhibit 46).

There is no doubt that Indian companies can win even in capital-intensive industries. However, they will need to think big and create world-scale plants. This means that the few players with the risk appetite to build large cost-effective plants will succeed.

Exhibit 45

ILLUSTRATIVE

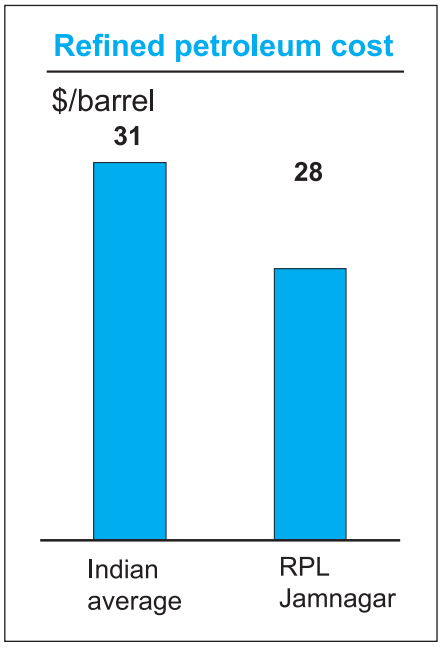
FACTORS AFFECTING PROJECT VIABILITY IN CAPITAL INTENSIVE SECTORS



* Weighted Average Cost of Capital
** Proximity to customers
Source: McKinsey team analysis

Exhibit 46

RELIANCE PETROLEUM CASE EXAMPLE



Skills at managing capital costs

- **Completed Jamnagar project in record 30 months as per schedule, without any cost overruns**
- **Set up a capital outlay of $3.4 billion - 30% lower per tonne capital costs, compared to other refineries in Asia**
- **Raised debt at international rates**

Source: Analyst reports, McKinsey analysis

Exhibit 47

ILLUSTRATIVE ACTIONS FOR EXPORTS IN AGRI-BASED SECTORS

$ Billion, 2000

Sector	Current exports: China	Current exports: India	World trade	Key actions required
• Poultry & meat products	0.8	0.3	29	• Increase proportion of processed poultry • Improve feed yields • Invest in marketing and focus on markets such as the Middle East that India is well placed to serve
• Beer & alcohol	0.12	0.03	28	• Limited international opportunity – regionalised markets
• Dairy products	0.04	0.02	25	• Improve quality (reducing pesticide residue) • Invest in branding • Improve acceptability of buffalo products in export markets • Target China market for milk powder
• Vegetable oils & products	0.1	0.2	19	• Raise export aspirations
• Bakery & milling products	0.1	0.04	11	• Invest in yield management, storage, handling, milling and processing • Raise marketing efforts in key export markets
• Sugar	0.09	0.1	9	• Limited opportunity due to political nature of the crop and consequent high production in areas with disadvantaged cost positions
• Coffee	0.1	0.3	9	• Focus on quality and marketing for Arabica • Improve yields for Robusta • Focus on marketing to large global blenders such as Illy and Folgers

Source: CMIE (India Trades)

Grow exports in agriculture-based industries

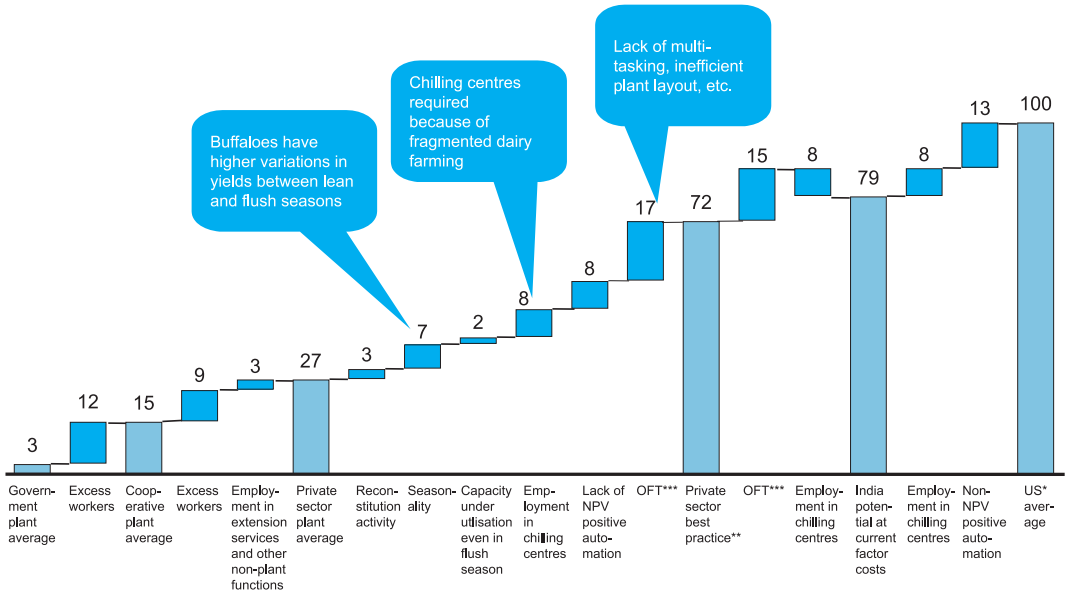
Agri-based industries include poultry, dairy products, vegetable oils and milling products. They account for about 7 per cent of India's total output. India has not built as strong a position in these sectors as it could (Exhibit 47).

However, there are several actions that companies can take to boost exports. For example, in dairy products, India has significant advantages: Indian farmgate dairy prices are amongst the lowest in the world; India has the largest cattle population in the world and is the world's largest milk producer. Despite these advantages, exports are currently low. Indian dairy companies can raise exports significantly through three actions: First, they should increase export targets and seek to become global players. Second, they should strengthen marketing efforts in overseas markets, including China. These efforts should also focus on making the dairy products produced from buffaloes acceptable in Western markets. Third, Indian companies should improve productivity by addressing the issues that prevent them from matching the productivity of best-in-class players (Exhibit 48). Farmers' co-operatives can play a large role in raising productivity by providing members with extension services such as information about best practices in feed and nutrition and by investing in improving breeds.

Although Indian players have several strengths in coffee, to cite another example, they fare poorly in key markets such as the US. This is a result of the several problems the industry faces today, including the poor quality of its Arabica and several service irritants (Exhibit 49).

Exhibit 48

OPERATIONAL FACTORS EXPLAINING PRODUCTIVITY GAP IN DAIRY



* In average size liquid milk plants only
** This particular plant had no chilling centres since it was located in an exceptionally dense milk production area
*** Organisation of functions and tasks
Source: MGI, *India: The growth imperative*

Exhibit 49

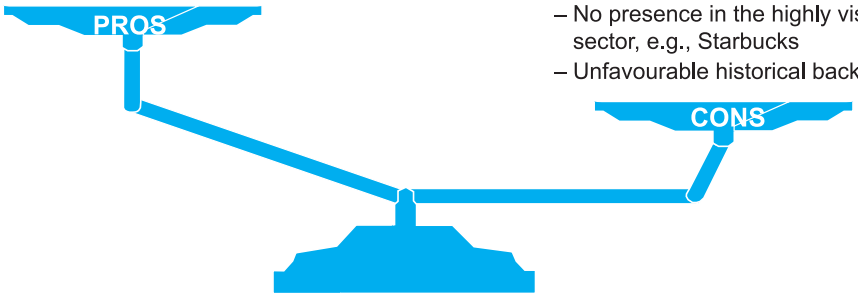
ADVANTAGES AND DISADVANTAGES OF THE INDIAN COFFEE INDUSTRY

- Near total agreement among experts that
  - Cup quality of Indian plantation is as good as Central American Arabica
  - Indian Arabica Cherry can compete with Brazilian naturals
  - Indian Robusta is the highest quality Robusta in the world

PROS

- Indian Arabica is perceived to be of lower quality than Central American coffee and thus shunned by roasters
- Limited potential for high price high quality Robusta such as Indian Robusta
- Not a relevant enough supplier as it is difficult to get 10-20 containers from a single exporter every month
- Multiple service irritants
  - Inconsistencies in quality of coffee from shipment to shipment
  - Losses rising from dealing with unreliable exporters
- Lack of awareness/interest in Indian coffee
  - Global traders not present in India
  - No presence in the highly visible specialty sector, e.g., Starbucks
  - Unfavourable historical background

CONS



Source: Interviews, McKinsey analysis

To overcome these problems and significantly grow exports, Indian players must significantly increase the proportion of Arabica and focus on improving its quality. In addition, Indian players should focus on raising the yields of the Robusta crop to reduce costs, target three key markets (the US, Germany and Italy) and integrate themselves with the global coffee trader community by significantly increasing marketing efforts.

In addition, Indian companies in agri-based sectors should look at how they could leverage the emerging concept of Agricultural Export Zones (AEZ) to drive exports of processed agricultural output. These zones should consist of co-located, scale driven infrastructure such as primary processing facilities (e.g., UHT treatment of milk), storage capacities (e.g., cold storage), logistics terminals for in and out-bound transportation and services such as extension help to growers, testing facilities, etc. These AEZs will then serve as magnets for secondary processing (e.g., conversion of milk into milk powder, cheese, etc.) and could help India capture a large share of world trade in agri-based manufacturing industries.

***

China's manufacturing success is replicable: progressive Indian companies and the Indian government can achieve this goal by undertaking a series of rapid and determined measures to boost domestic demand and exports. This will transform India's manufacturing landscape: manufacturing GDP will account for 25 per cent of Indian GDP, more than 25 million new jobs will be created and Indian manufacturing exports will grow six-fold to almost $160 billion, all of this by 2012. The size of the prize is too great to risk losing it.

If the recommended changes are not carried out, India will lose its opportunity to become a global manufacturing hub, could be besieged by imports and be unable to generate the income growth and job creation that its burgeoning population will need. India cannot risk inaction. ■

APPENDIX A

Study Methodology

The purpose of our study was to understand the drivers of China's manufacturing success and assess the implications for Indian government policy as well as the implications for the competitiveness of Indian companies. Over the course of the study, we conducted extensive interviews across India and China with companies, economists and government officials. We also drew heavily on existing work in our Indian offices (*India: The Growth Imperative*); in our offices in Greater China (Shanghai, Beijing, Honk Kong and Taiwan); and independent studies on China conducted by academics and independent institutes such as the 90s Institute, companies such as Ace Global and institutions such as the World Bank and the Asian Development Bank.

We conducted five broad streams of work. This appendix describes the methodology followed in each stream.

Study of macro-economic differences

To estimate the extent of the gap between India and China, we started by analysing macro-economic data on their respective manufacturing sectors, relying mostly on data from the World Bank's World Development Indicators. We used PPP adjusted data to ensure that our comparison of incomes was corrected for price differences across the economies. We compared growth rates and investments for manufacturing and other sectors of the economy. We also studied productivity differences and growth of productivity over the last decade.

We then probed deeper to understand the differences in productivity and output for different sectors within manufacturing, for which we used data from the CSO, the ASI and the NSSO in India as well as the China Statistical Yearbook in China.

To substantiate the results of this analysis, we also conducted several interviews with companies and analysts across several manufacturing sectors. We cross-checked the volume data with bottom-up plant level estimates for a few industries (e.g., colour TVs, fans). We then proceeded to identify the

reasons for China's higher volumes. We found that while higher population and different income distribution explained part of the difference in volumes, a bulk of the difference was accounted for by the lower prices in China.

We compared prices across India and China through retail surveys done by the team on its visit to China as well as through research conducted by McKinsey's offices in India and China. In every case where this was possible, we compared prices for identical products, e.g., the same model of television, made by the same manufacturer in India and China. Where this was not possible, we compared prices of products of comparable specifications to avoid problems with quality differences. In comparing price differences, we used current exchange rates between the RMB and the Indian Rupee to the US dollar.Our study of price differences led to our conducting detailed case studies to understand the reasons behind them.

Detailed case studies

We conducted three detailed case studies to understand the sources of the price difference between India and China. The products we studied in detail were apparel, colour televisions and ceiling fans. To ensure that we covered the entire manufacturing sector, we studied the entire value chain of each of these products. For example, for ceiling fans, we studied raw materials such as steel, aluminium and copper and went further back along the value chain to the mining stage. Thus, we covered products across sectors that account for over 80 per cent of India's manufacturing sectors (Exhibit 50).

We constructed our case studies using data from extensive interviews and plant visits with key players for the chosen products in India as well as in China (Exhibits 51 and 52). We then validated our findings with these companies, with equity analysts in India and China as well as with McKinsey experts in both countries. Finally, we synthesised the results of each case study to arrive at the overall sources of price difference between Indian and Chinese products.

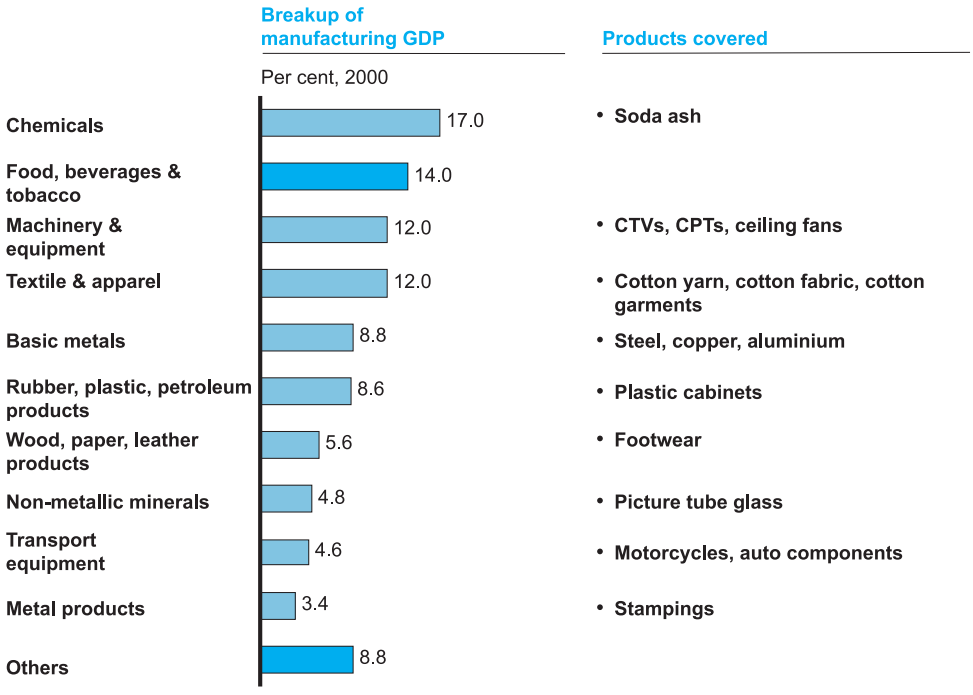
Our apparel case study focused on explaining the difference between free-on-board (FOB) prices of Indian and Chinese apparel, while the TV and fans case studies focused on explaining the difference in retail prices in India and China. This ensured that our study uncovered the reasons for price differences in exports as well as in domestic markets.

Study of Chinese macro-economic policies

The price differences, the resultant volume explosion and export performance were all the result also of government policy. We therefore studied the macro-economic policies that China put in place as part of its reform process. We pieced together the key reforms through interviews with economists and policy makers in China, and through extensive reviews of books, articles and research papers written on the topic. We contrasted each of the key Chinese policies with the corresponding policies in India, again through interviews with policy makers and companies in India as well as by synthesising existing literature on the subject.

Exhibit 50

SECTOR COVERAGE OF DETAILED CASE STUDIES



Source: CMIE, CSO

Exhibit 51

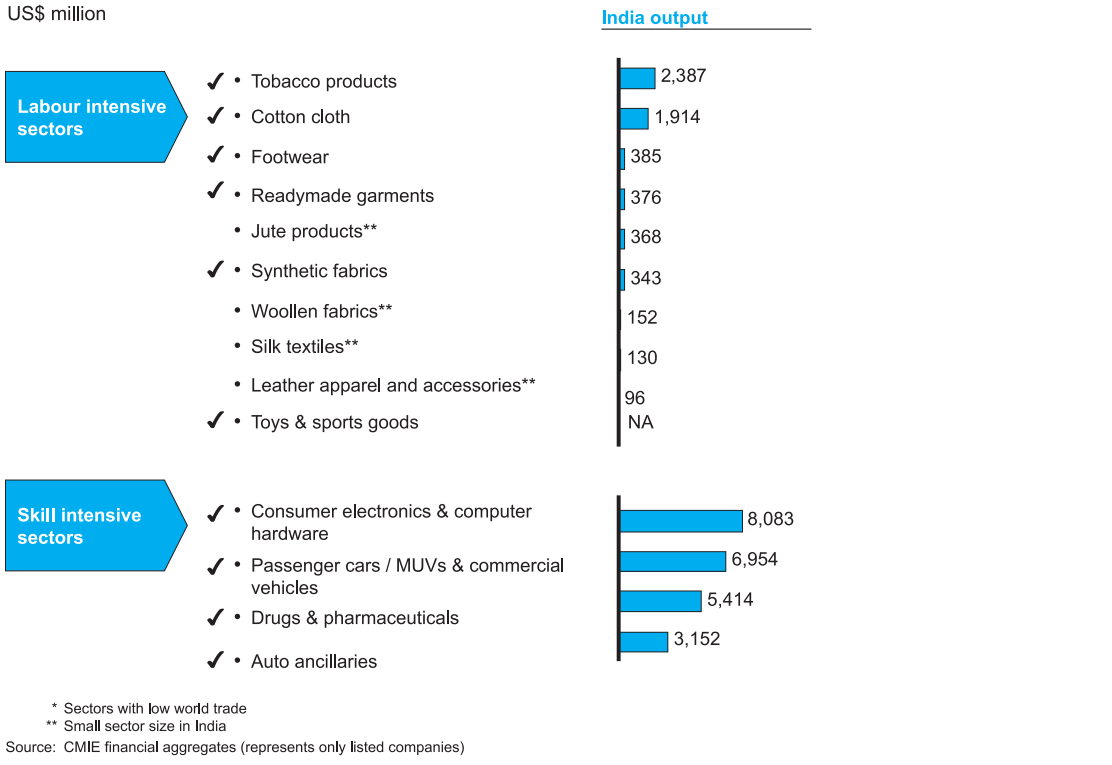
INTERVIEWS AND MEETINGS FOR FANS AND COLOUR TVs

	India	China
Ceiling fans	• Crompton Greaves • Bajaj Electricals • Polar • Remi Udyog	• Midea • Shunde Junke
Colour TVs	• Onida • Philips India • Samtel • LG	• Konka • Shanghai Video and Audio (SVA) • Philips China • TCL equity analyst in Hong Kong
Apparel	• Ten garment exporters • Members of four industry associations • Senior executives from five fabric manufacturing companies • Textile commissioner • Two global apparel buyers	• Textile mill • Apparel factory

Exhibit 52

SECTOR ASSESSMENT

US$ million



* Sectors with low world trade
** Small sector size in India

Source: CMIE financial aggregates (represents only listed companies)

Mini case studies

In addition to the detailed case studies mentioned above, we also conducted several mini case studies to assess India's export potential based on the competitiveness of various manufacturing sectors. For this analysis, we used CMIE's classification of the manufacturing sector, which divides manufacturing into about 70 sub-sectors. Of these, we chose the top 40 sectors that account for about 90 per cent of total manufacturing output for our analysis (Exhibits 52-56). For each of these sectors, we analysed Indian and Chinese imports and exports and world trade to understand in which sectors each country had an advantage.

We further classified each sector as labour-intensive, capital-intensive, skill-intensive, raw material-based and agricultural input-based to determine what patterns in competitiveness emerged across these groups of sectors. We leveraged previous research work in this area (Jorg Raupach-Sumiya's paper entitled, "Chinese Firms as Emerging Competitors – Challenges for Japan's industry") to create a preliminary classification. We supplemented this with analysis of the labour and capital content in each industry to finalise the classification.

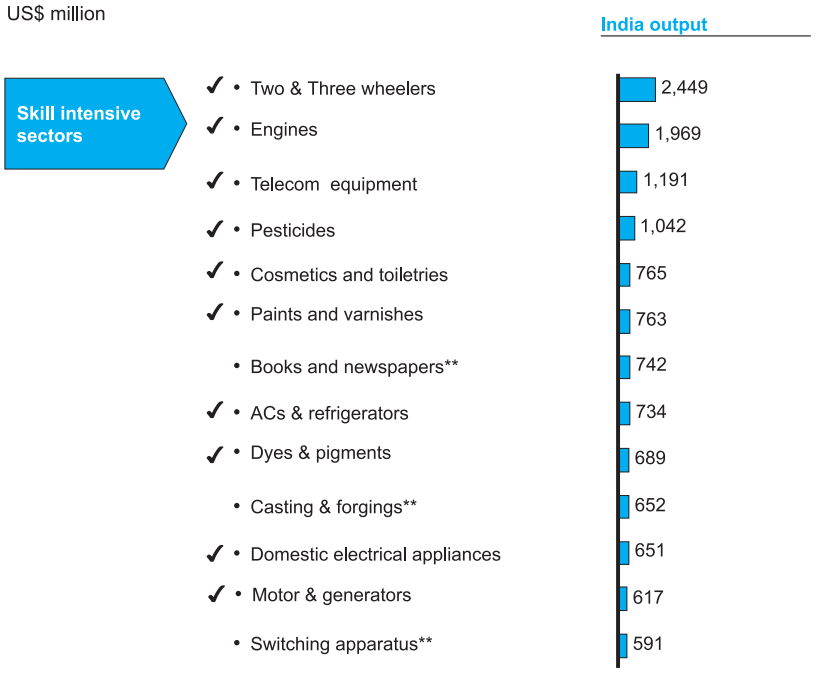
We supplemented our analysis of these sectors with interviews with over 25 companies, 10 equity analysts in Hong Kong and Shanghai and several McKinsey experts in China and India.

Exhibit 53

SECTOR ASSESSMENT (CONTINUED)

US$ million

✓ Included for export assessment



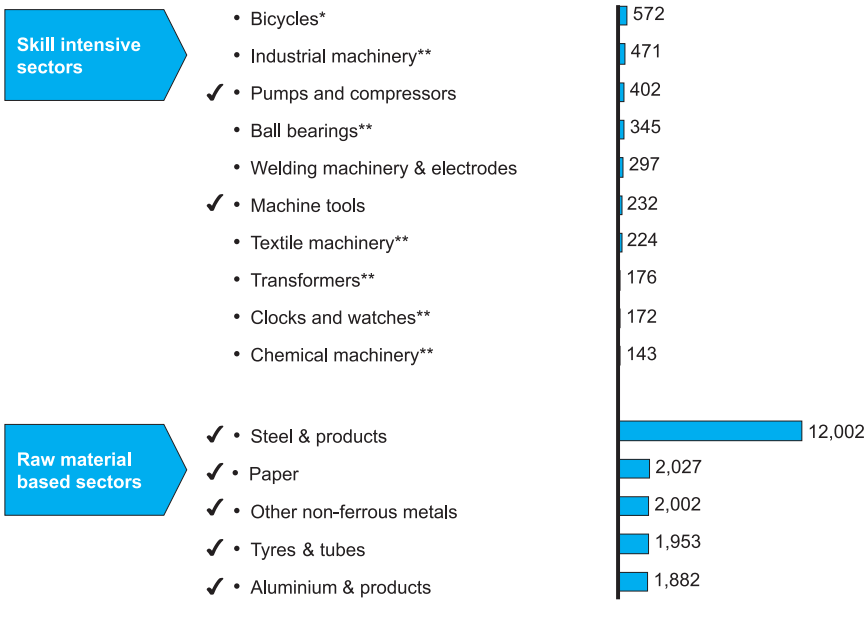
* Sectors with low world trade
** Small sector size in India
Source: CMIE financial aggregates (represents only listed companies)

Exhibit 54

SECTOR ASSESSMENT (CONTINUED)

US$ million

✓ Included for export assessment



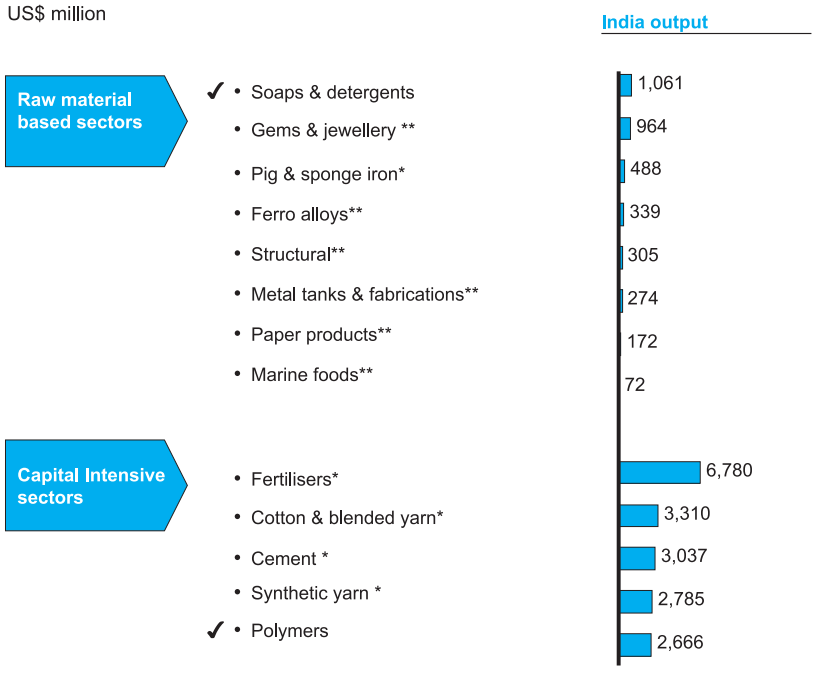
* Sectors with low world trade
** Small sector size in India
Source: CMIE financial aggregates (represents only listed companies)

Exhibit 55

SECTOR ASSESSMENT (CONTINUED)

US$ million

✓ Included for export assessment



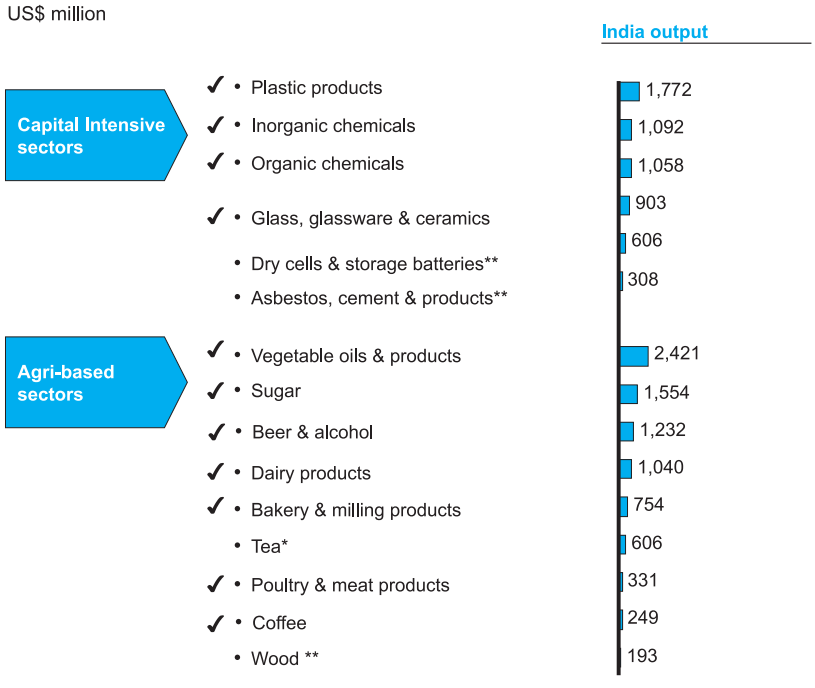
* Sectors with low world trade
** Small sector size in India
Source: CMIE financial aggregates (represents only listed companies)

Exhibit 56

SECTOR ASSESSMENT (CONTINUED)

US$ million

✓ Included for export assessment



* Sectors with low world trade
** Small sector size in India
Source: CMIE financial aggregates (represents only listed companies)

Synthesis

To synthesise our findings, we met with several members of the CII National Council, with economists, government officials and academics. We also conducted several meetings with industry experts in India, within and outside McKinsey, to validate our findings as well as to finalise our recommendations. ■

APPENDIX B

Colour TV Case Study

China's domestic television market is currently over six times as large as India's. Given that there is only a 60 per cent income differential between the two countries, India's market could be much larger than it is. The focus of our case study was to understand the key drivers of China's larger TV market and to understand the constraints that inhibit India from achieving its potential.

China is far ahead of India

China is currently far ahead of India in both exports and domestic consumption of colour tvs. In fact, China has emerged as the largest TV set producer in the world, with a 26 per cent share of world production. Its annual production is nearly seven times India's (at 36 million units vs. 5.2 million units).

These volumes are driven by much higher domestic consumption (30 million units vs. 5 million units in India) and significantly larger exports (6 million vs. 0.2 million in India). The Indian market for TVs is greatly underpenetrated (75 TVs per 1,000 persons) in comparison with the Chinese market (292 TVs per 1,000 persons) and the rest of the world (Exhibit 57).

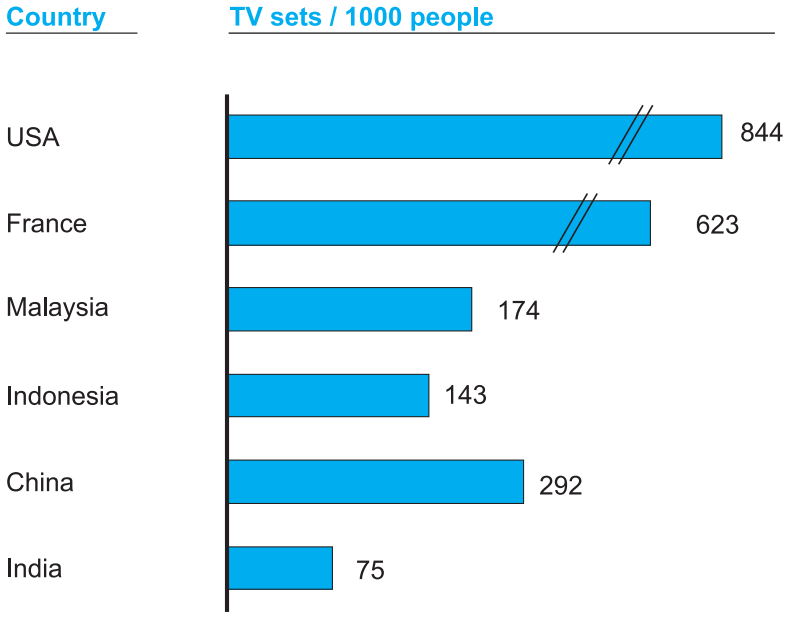
This difference in domestic consumption cannot be explained by income distribution alone. In fact, China's per capita consumption of colour TVs is much higher than that of other countries with comparable income levels (Exhibit 58). The difference is also caused by the lower retail prices in China, which are 35-40 per cent less for comparable TVs (Exhibit 59).

Three key factors drive the difference

We found that the comparatively lower domestic prices of similar TVs in China are driven by three key factors: lower taxes; lower raw material prices driven by lower import duties and higher scale of component manufacturers; and lower margins driven by higher competitive intensity and by lower import duties. In conducting this analysis, we studied the entire value chain (Exhibit 60) to understand the total incidence of taxes, labour, capital, etc. (Exhibits 61 and 62).

Exhibit 57

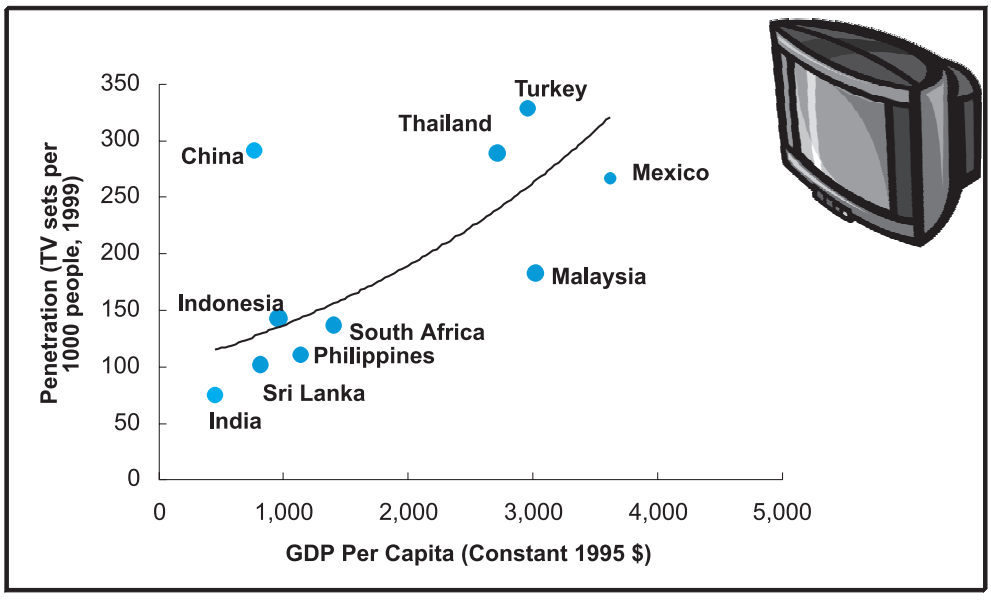
TV PENETRATION ACROSS COUNTRIES



Source: World Development Indicators

Exhibit 58

PENETRATION OF TVs WITH RESPECT TO GDP PER CAPITA FOR DIFFERENT COUNTRIES



Source: World Development Indicators, McKinsey analysis

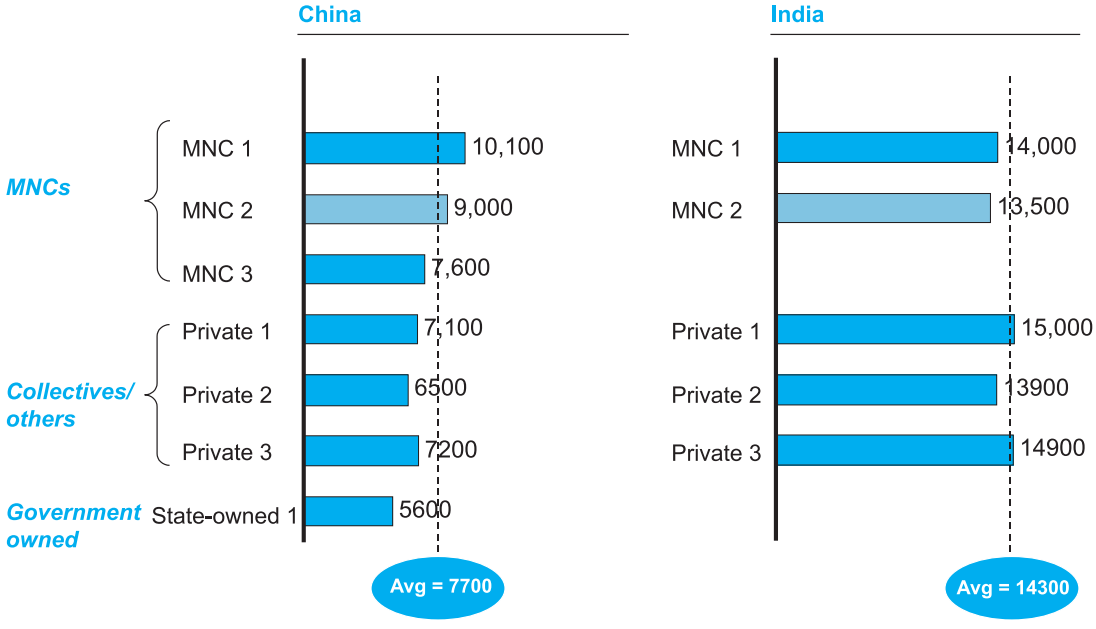
Exhibit 59

RETAIL PRICE COMPARISON – COLOUR TVs

Detailed analysis conducted

Prices of 21" full & flat square tube (FFST) colour TVs

Rupees per unit



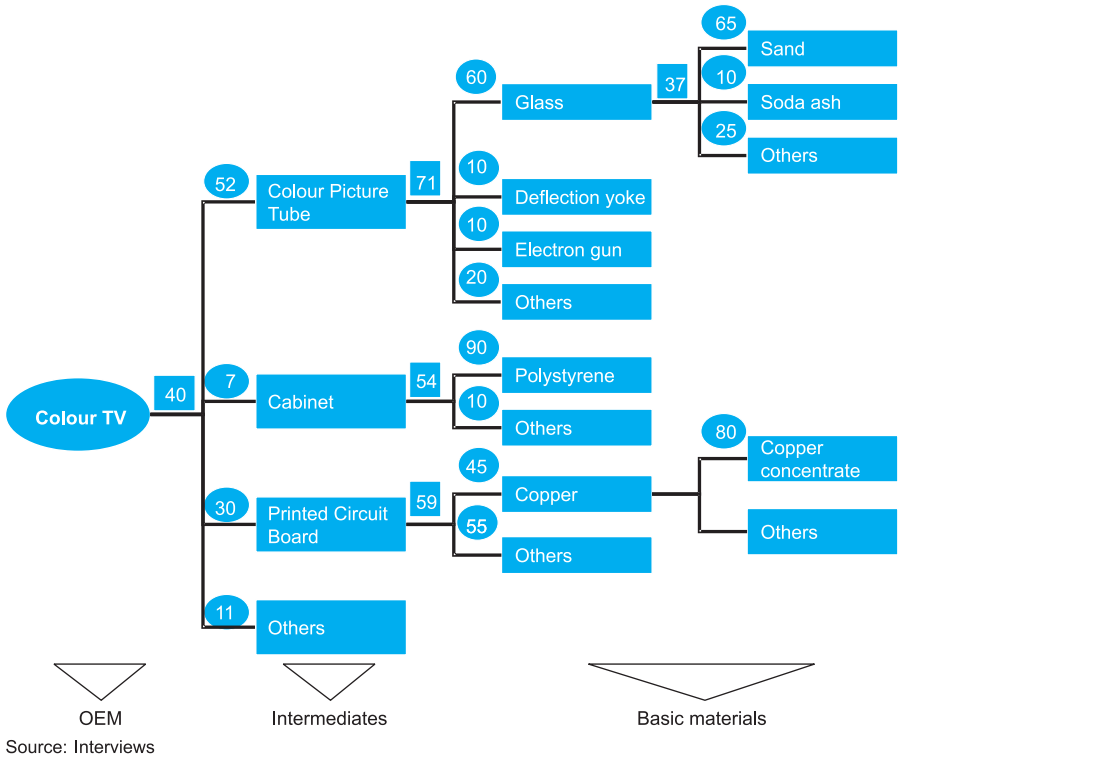
Source: Dealer interviews

Exhibit 60

COLOUR TV VALUE CHAIN

Raw material content

Proportion of raw material cost



Source: Interviews

- **Lower taxes:** Chinese manufacturers pay a VAT of 17 per cent on ex-showroom prices (amounting to around 14 per cent of retail price), while Indian manufacturers pay almost 29 per cent of final retail price as taxes. Colour TV manufacturers in India pay about 12 per cent of the final retail price as excise duties and a further 12 per cent of retail price as sales tax. Excise duties paid on the inputs (e.g., colour picture tube, cabinet) at each stage are refunded to the OEM as Modified VAT (MODVAT) credit. However, sales tax on the intermediate and basic inputs has an additive effect and altogether makes up about 5 per cent of the final retail price.

The difference in taxes between India and China is a result of both a higher tax rate and a higher base (price) on which tax is calculated. The "base" effect explains nearly 60 per cent of the total tax difference between India and China.

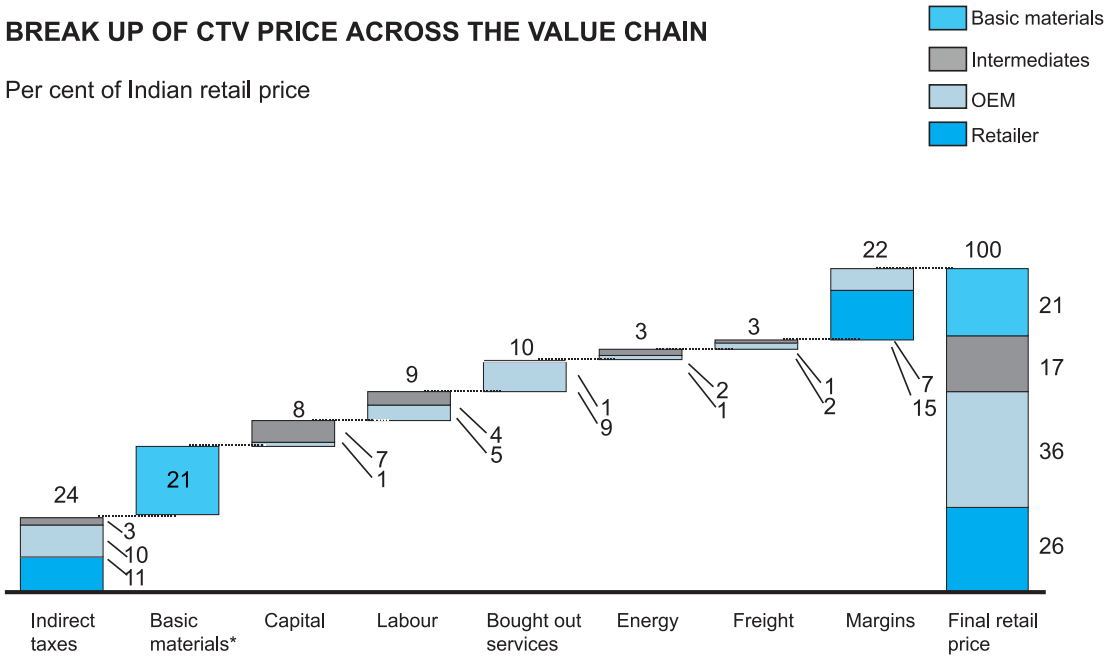
- **Lower margins:** Intense competition in China has driven down profit margins for manufacturers in most industries in China. This is also true for colour TVs, where China has close to 100 players with installed capacity in excess of 50 million units. This high competitive intensity is caused historically by the drive by each province to establish a TV assembly plant of its own.

- **Lower raw material prices:** The component supplier industry in India suffers from lower scale than China. For instance, in the TV Glass industry, which has a Minimum Economic Scale (MES) of 7.5 million units, ACBC Glass Company in China has a capacity of 12 million glass shells compared to Videocon in India which has a capacity of 5 million. In addition, lower import duties in China help drive components prices closer to international levels. For

Exhibit 61

BREAK UP OF CTV PRICE ACROSS THE VALUE CHAIN

Per cent of Indian retail price

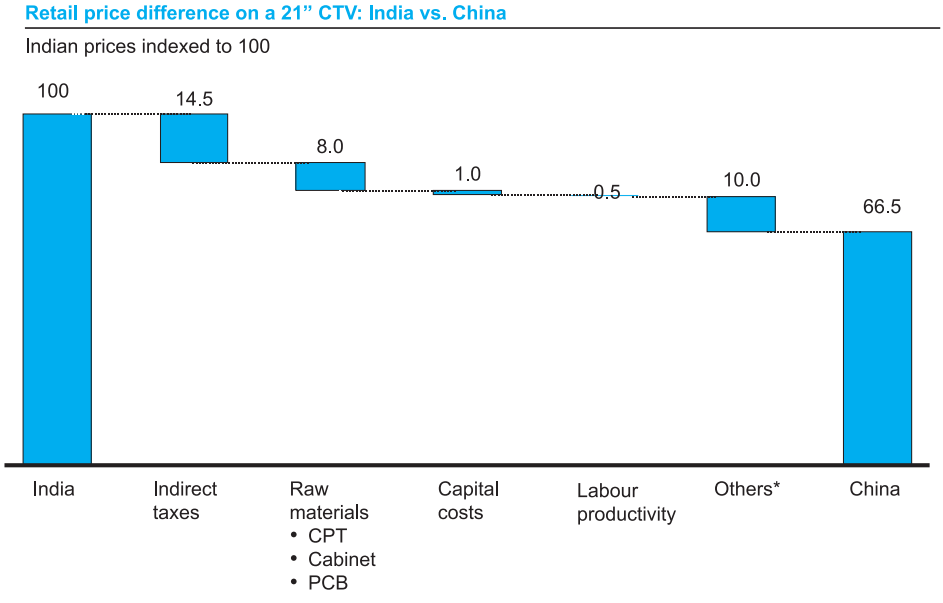


* Polystyrene, glass, copper

Source: McKinsey analysis

Exhibit 62

DRIVERS OF PRICE DIFFERENCE – COLOUR TV



* Includes margins and distribution costs, manufacturer margins being the biggest

Source : Interviews, McKinsey analysis

example, the import duty on picture tubes and glass in India is 30 per cent, while it is 10 and 12 per cent respectively in China.

The price comparison above is based on the cost structure of a world-class player. However, an additional feature of the Indian industry that bears mention is the fragmentation of capacity by most OEMs. While most large Indian OEMs are technically above the MES of 0.6 million units, their capacity is fragmented as a result of sales tax holidays that have given them the incentives to set up small manufacturing plants in several states. Most industry watchers feel that this has resulted in the creation of several sub-scale and inefficient plants for the sole purpose of availing of tax breaks. This results in lower productivity for such players compared to their Chinese counterparts and their more efficient Indian competitors. However, these inefficient plants survive and successfully compete due to tax exemptions and duty protection.

Indian companies should grow the domestic market and target exports

Indian manufacturers need to focus their efforts on increasing the size of the domestic market and on growing exports of Indian TVs. In order to grow the domestic market, Indian companies will need to achieve lower price points (e.g., by product redesign, productivity improvements and sourcing components from Chinese suppliers). Indian companies can also learn from China's performance by significantly increasing their focus on exports. This can be done through contract manufacturing for global branded players as well as through exports of their own brands (as, for example, TCL has done in China). ■

APPENDIX C

Ceiling Fans Case Study

China's electric fan industry is currently far larger than India's, in both exports and domestic consumption. China's exports are currently 50 times as high as India's and the domestic sector is four times as big. The objective of our case study was to understand the drivers of this superior Chinese performance by understanding the drivers of the larger domestic sector.

China is far ahead of India

China's annual production today is around eight times that of India (160 million units vs, 18 million units). This is driven both by higher exports and by higher domestic consumption. Chinese exports in 1999 were over $630 million in value, or about 60 per cent of all exports (Exhibit 63). China's exports today are 50 times as high as India's. The domestic market for electrical fans, too, is much larger than India's, accounting for 60 million units as against 16 million in India.

Penetration levels of fans in China are twice those of India. This is explained both by higher incomes and by lower domestic prices in China, where prices are 25-30 per cent lower than in India. Since ceiling fans dominate the Indian market (accounting for 70 per cent of total sales), we chose a 48-inch, 3-blade ceiling fan for comparing prices. We found that prices for this fan were between 25 and 30 per cent lower in China than in India (Exhibit 64).

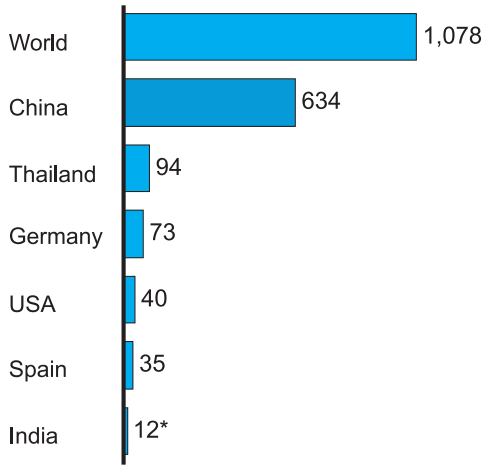
Three factors drive the price difference

We found that the main drivers of the price difference between India and China are lower indirect taxes; lower raw material prices driven by lower import duties; higher labour productivity; and lower capital costs. We also analysed the entire value chain for fans, down to basic materials such as steel, aluminium and copper wire to understand the break up of each element of cost (Exhibits 65, 66 and 67).

Exhibit 63

EXPORTS OF ELECTRIC FANS

$ million, 1999



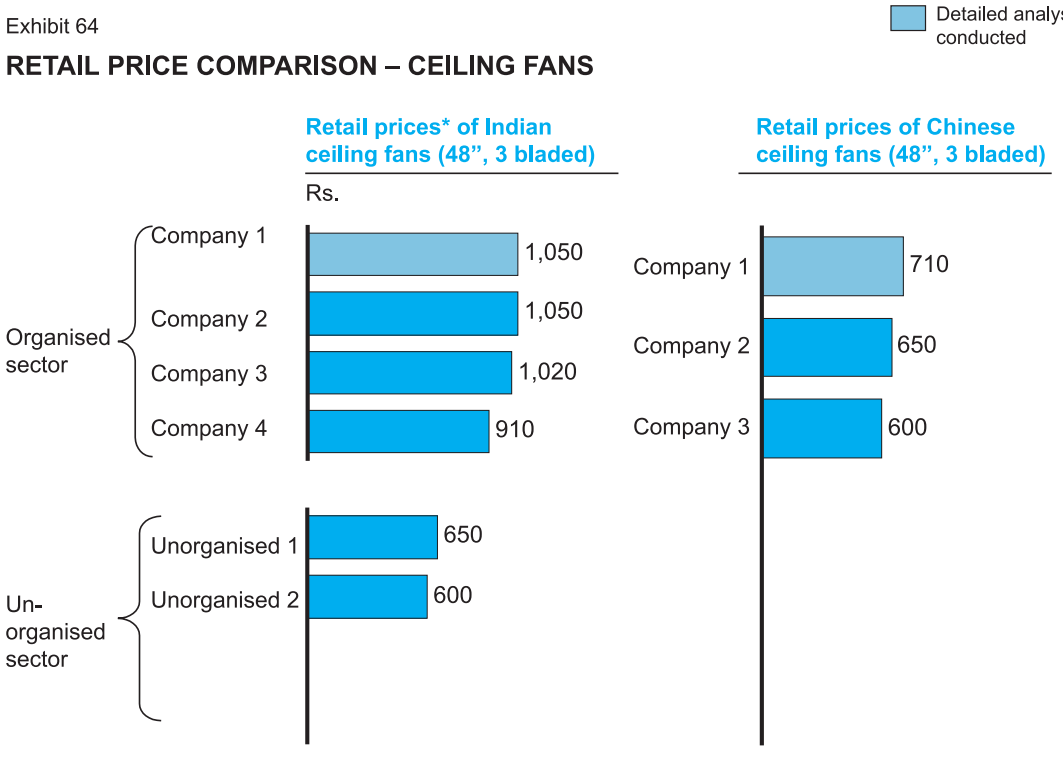
- China exported more than 100 million units of fans as compared to 2 million units by India
- More than 80% of China's exports were to Hong Kong, USA, Japan and Australia, while India's exports were mainly to UAE, Nigeria & Sri Lanka
- The average FOB price for a fan from China is ~$6 vs. ~$11 for an Indian fan

* 1998 data

Source: UN Trade Data, interviews

Exhibit 64

RETAIL PRICE COMPARISON – CEILING FANS



* Price in Mumbai net of Octroi

Source : Interviews, retail price surveys, 2002

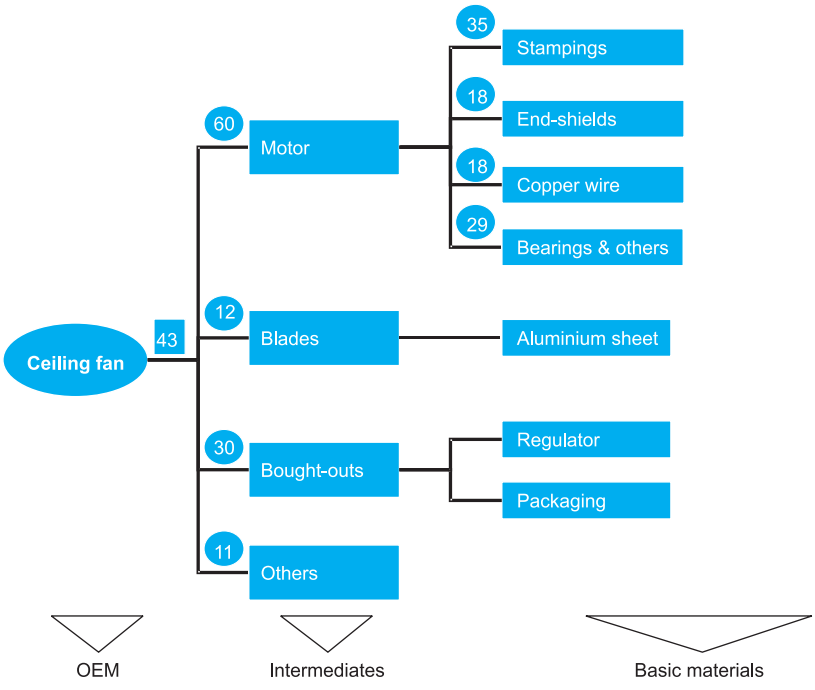
Exhibit 65

CEILING FANS VALUE CHAIN

Raw material content

Proportion of raw material cost

Per cent of raw material cost (at each stage)

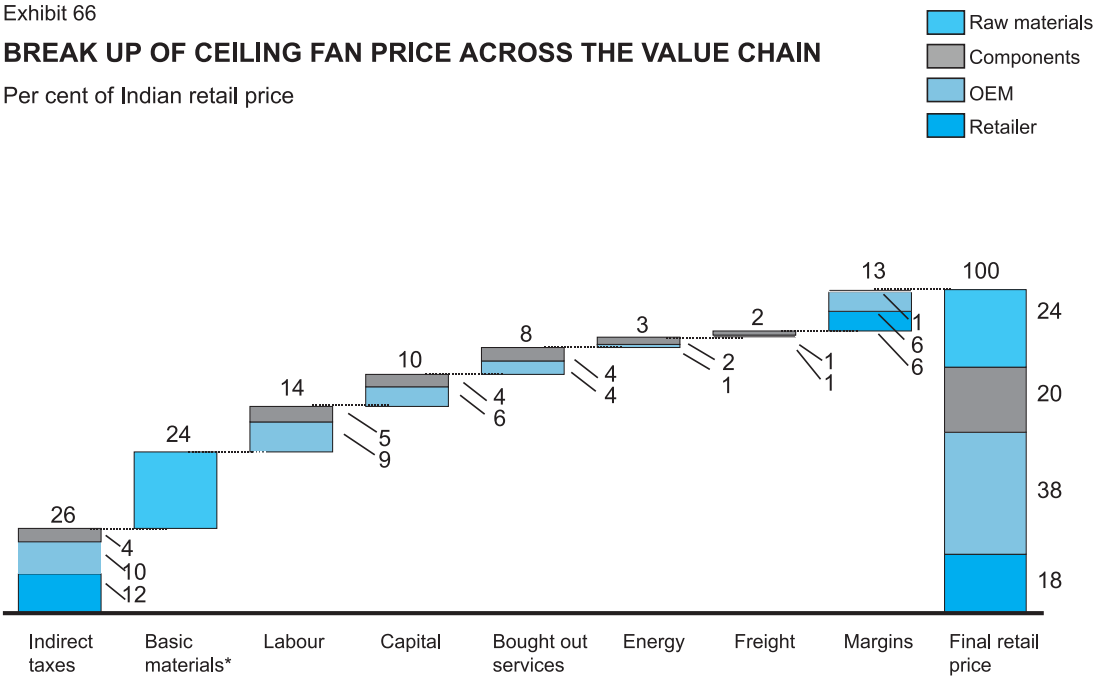


Source: Interviews

Exhibit 66

BREAK UP OF CEILING FAN PRICE ACROSS THE VALUE CHAIN

Per cent of Indian retail price



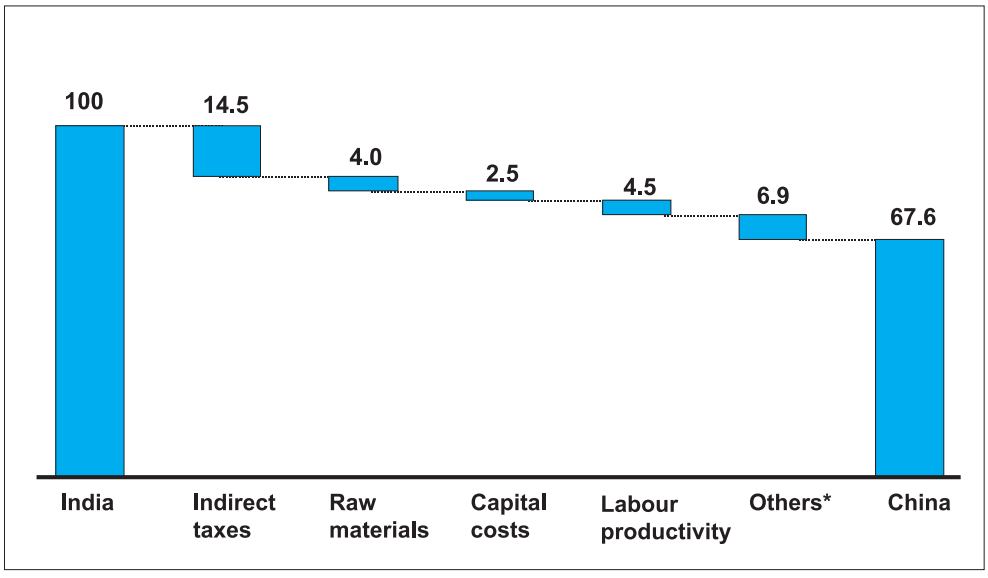
* Aluminium, copper wire, steel

Source: McKinsey analysis

Exhibit 67

DRIVERS OF PRICE DIFFERENCE – CEILING FANS

Indian retail price indexed to 100



* Includes margins, capital productivity and lower specifications for the product in China, due to the use of steel rather than aluminium

Source : Interviews, McKinsey analysis

Lower taxes

Higher indirect taxes in India account for close to half the retail price difference between Indian and Chinese ceiling fans. This difference is driven by both a higher tax rate (26 per cent in India vs. 15 per cent in China) and a higher base (price) on which tax is calculated.

Fan manufacturers in India pay about 11 per cent of the final retail price as excise duties and a further 12 per cent of the retail price as sales tax. Excise duties paid on the inputs (e.g., ball bearings, copper wire) at each stage are refunded to the OEM as MODVAT credit. However, sales tax on the intermediate and basic inputs has an additive effect and altogether makes up close to 3 per cent of the final retail price.

Lower material costs

Basic material costs account for 24 per cent of the final retail price of a fan and are 15-20 per cent lower in China. This is mainly driven by higher import duties in India and purchasing economies of scale for the large Chinese manufacturers.

Copper (accounting for 20 per cent of the basic material costs) is priced 25 per cent higher in India due to higher import duties (25 per cent in India vs. 5 per cent in China in 2001). Aluminium (constituting 40 per cent of basic material costs) is about 10 per cent costlier in India, again due to higher import duties. Steel prices too are between 5 and 10 per cent lower in China due to lower import duties. In addition, higher scales of operation enable Chinese manufacturers to get up to a 5

per cent discount on raw material prices.

Lower capital costs

Chinese manufacturers have lower total capital costs because they can access capital at lower interest rates and because they enjoy higher capital productivity. Capital productivity is higher in China because all major fan players there (Midea, Airmate, etc.) have huge scale (around 20 million fans) and better capacity utilisation on account of higher demand (allowing most Chinese manufacturers to run two shifts a day as opposed to one for Indian manufacturers).

Indian companies should reduce costs and target exports

In order to increase their competitiveness in fan manufacturing, Indian players need to focus on driving down costs by pursuing options such as sourcing components from China and increasing productivity to world-class levels. In addition, Indian companies should build an export mindset and should aim to achieve a significant part of their turnover from exports. This would also require Indian manufacturers to modify their product portfolio and build the capability to produce table, pedestal and wall (TPW) fans, which are more traded than ceiling fans. ■

APPENDIX D

Apparel Case Study

Apparel is India's second largest export segment, after textiles, and employs over 4 million people. This case study illustrates how far ahead of India China is in exports of products in labour intensive sectors. The objective of our case study was to understand what drives China's superior performance in apparel exports, and thus to understand the sources of China's overall competitiveness in manufactured exports.

China has far outdone India in apparel exports

China is one of the largest exporters of apparel in the world, with a share of over 20 per cent of world apparel trade. Chinese exports touched nearly $30 billion in 1999, compared to Indian exports of $5 billion. The main reason for this difference in size of exports is that India does not even compete in the largest traded apparel segments worldwide, and is outdone by China in the segments in which it does compete. The major components of Chinese exports are men's suits and jerseys, which are among the largest traded apparel items in the US and Europe. By contrast, India has only a minor presence in these segments (Exhibit 68).

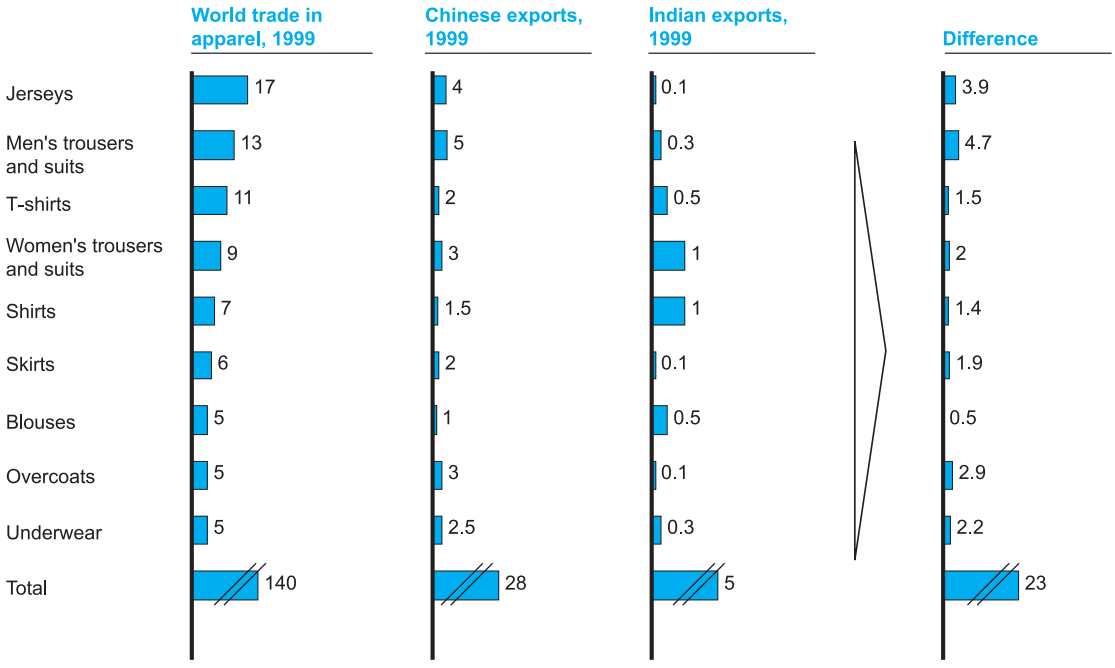
In addition, Indian exports are focused on countries that have apparel import quotas (restrictions placed by importing countries on the amount of apparel that can be bought from specific countries), and India's share of non-quota countries is miniscule. China, by contrast, has a larger share of non-quota markets. More than 55 per cent of China's exports are to Japan and Hong Kong, both of which are quota-free. In addition, China's exports to these non-quota markets are growing much faster than its exports to quota markets such as the US (over 30 per cent, compared to 10-15 per cent). In contrast, India's largest market is a quota country, the US, which accounts for a third of India's total exports (Exhibit 69).

With the removal of these import quotas in 2005, China appears set to increase its share in quota markets as well and thus to further improve its position in world apparel trade.

Exhibit 68

COMPARISON OF EXPORTS BY SUB-CATEGORY

$ US billion



Source: UN International Trade Statistics

Superior price, quality and delivery drive China's advantage

The reason for China's superior performance in the apparel sector is that Chinese exporters perform better than their Indian counterparts in terms of price, quality and delivery.

Lower prices of Chinese apparel

A Chinese manufactured t-shirt has a landed price in the US about 20 per cent lower than the Indian price for a corresponding product. The price difference in other types of apparel (shirts, trousers, etc.) is also in the range of 20-25 per cent. Our study compared the FOB prices of woven apparel in India and China and found that the difference is about 20 per cent (Exhibit 70).

The lower prices of Chinese apparel are mainly driven by cheaper raw material and higher labour productivity, as described below. Other factors are lower margins and overheads. Labour costs (wages), on the other hand, do not differ across India and China. We also studied the entire value chain in apparel to understand the break up of each cost element (taxes, labour, etc.) along the entire value chain (Exhibits 71, 72 and 73).

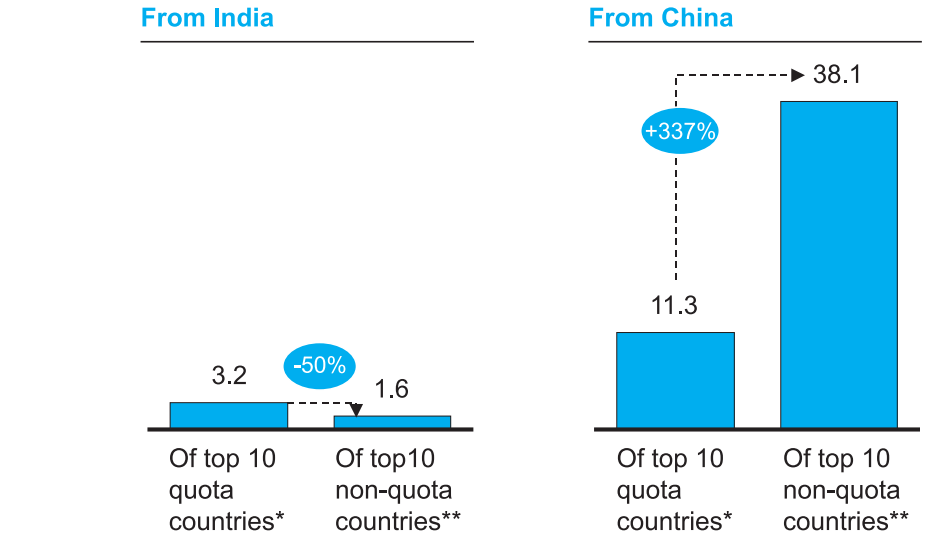
- **Lower raw material costs:** Chinese fabric is 25 per cent cheaper than Indian fabric. The majority of this price difference arises from higher conversion costs in the weaving process in India.

  Most of the fabric in India (90 per cent of all exported fabric) is made in powerlooms, which

Exhibit 69

INDIAN AND CHINESE APPAREL MARKET SHARES ACROSS QUOTA AND NON-QUOTA MARKETS

Per cent of total apparel imports



* US, Germany, UK, France, Italy, Belgium, Canada, Spain, Austria, Denmark

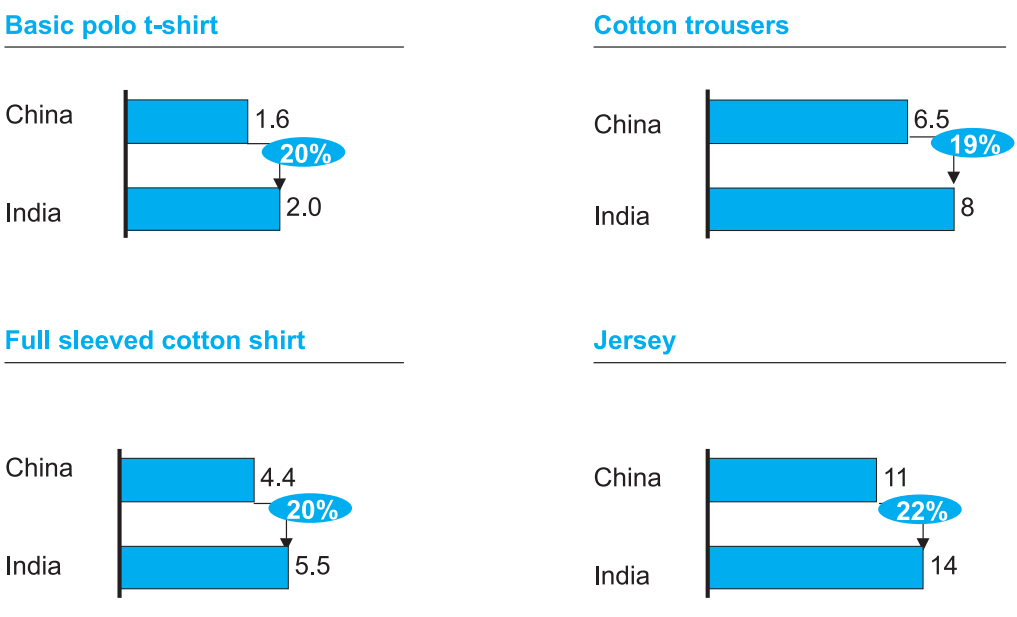
** Japan, Netherlands, Switzerland, Sweden, Australia, Norway, Singapore, Poland, Korea, Chile

Source: UN International Trade Statistics

Exhibit 70

FOB PRICE COMPARISON FOR INDIAN AND CHINESE APPAREL

US $ per unit

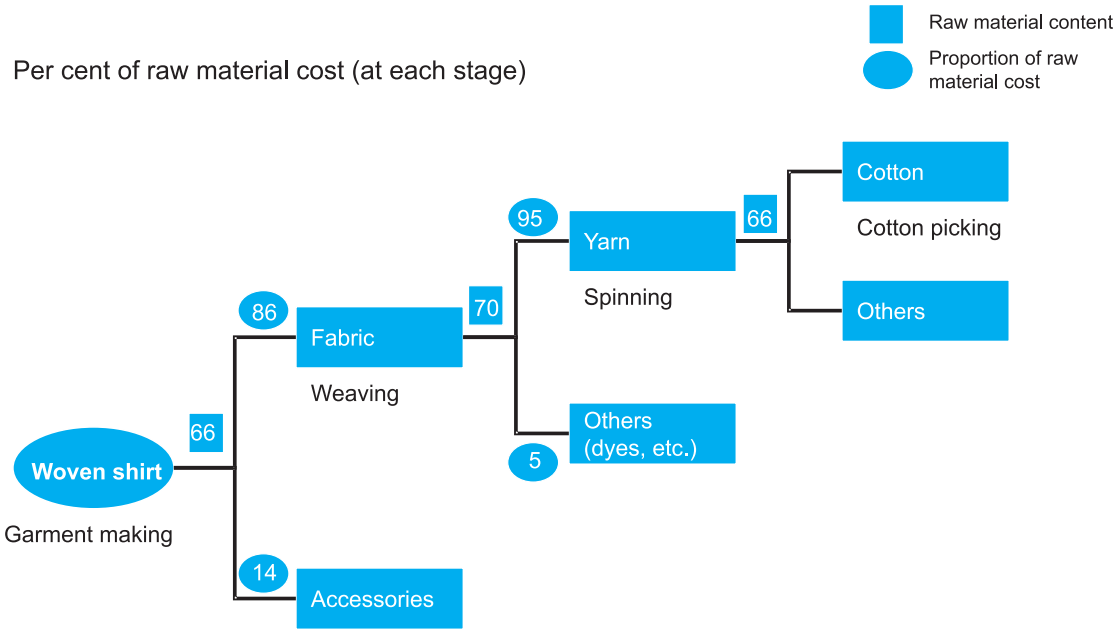


Source: Buyer interviews

Exhibit 71

VALUE CHAIN FOR WOVEN APPAREL

Per cent of raw material cost (at each stage)

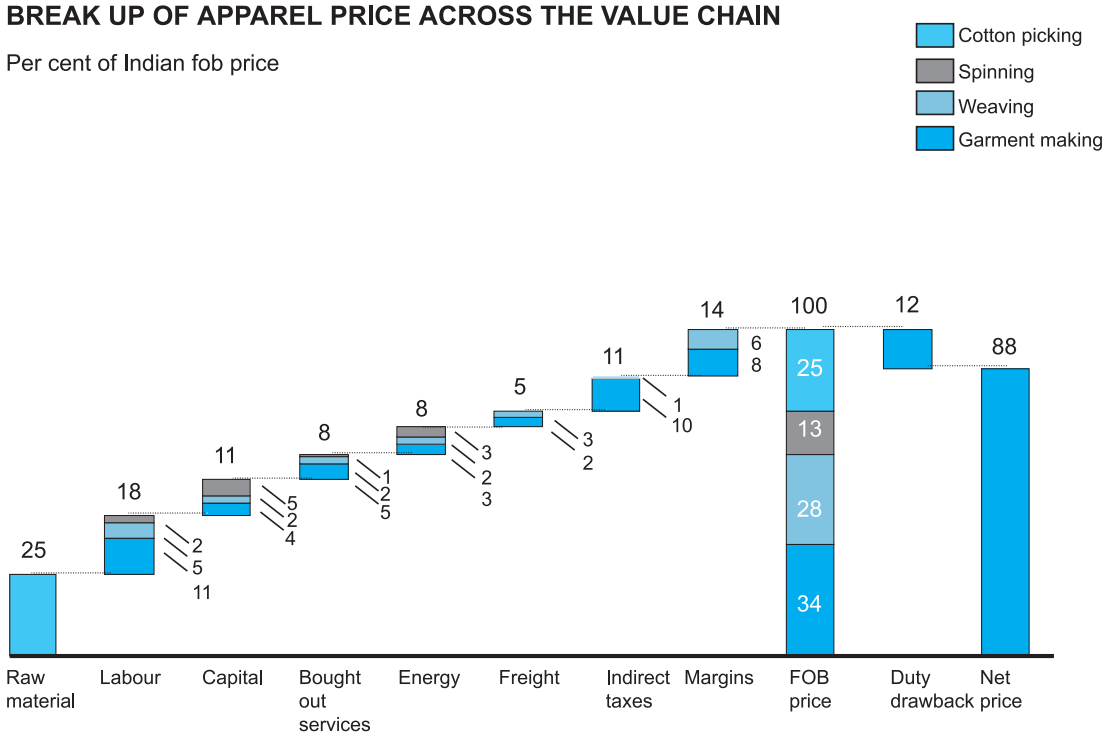


Source: Interviews

Exhibit 72

BREAK UP OF APPAREL PRICE ACROSS THE VALUE CHAIN

Per cent of Indian fob price



Source: McKinsey analysis, interviews

are sub-scale units that have low productivity. Large-scale composite mills account for only 5-10 per cent of the fabric content that goes into garment exports, unlike in China where large mills are the dominant producer. In India, the government has favoured the powerloom sector and provided it with advantages over the mill sector through fiscal benefits such as lower excise and sales tax rates, making powerloom fabric much cheaper than mill fabric. Moreover, in the seventies, the government prevented any expansion of mills. This restriction, along with the lower-priced powerloom fabric ensured that little new mill capacity was set up in India. Further, the mills that do exist have outdated and inefficient equipment. Despite changes in the regulations governing this sector, Indian mills have been unable to restructure and revive themselves due to the stringent laws governing the restructuring and exit of companies. For example, many mills that were shut down due to a lack of demand for their relatively higher-priced fabric have been unable to restructure due to restrictions on sale of land and on closure of units.

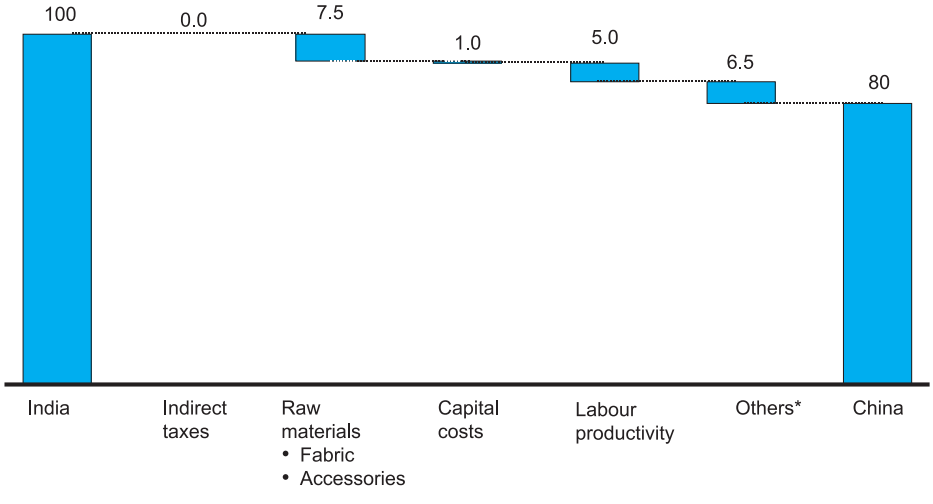
The low scale and very low labour productivity of the powerloom sector (about one-fourth the productivity of Chinese mills) drives up prices in this labour intensive product. In addition, margins on fabric in the powerloom sector (10 per cent) are higher than those on fabric in China (3 per cent). Another cause of lower fabric cost in China is the lower cotton yarn prices there. Cotton yarn in China is 5 per cent cheaper than is yarn in India, mainly due to lower capital costs in China.

¶ **Higher labour productivity in stitching apparel:** An Indian worker produces twenty shirts in

Exhibit 73

DRIVERS OF PRICE DIFFERENCE - APPAREL

Indian fob prices indexed to 100



* Includes margins and overheads

Source : Interviews, McKinsey analysis

an 8-hour shift, compared to his Chinese counterpart who produces 35 shirts in the same time. This difference is driven mainly by the exposure of Chinese companies to best practice foreign companies from countries such as Japan, Hong Kong, Korea and Taiwan who have set up plants in China to make use of the labour cost advantage and the flexible labour regime that prevails there.

In India, the apparel sector was reserved for the small-scale sector until 2001. Although this restriction has now been removed, there is still an excise differential for small players. As a result, there are few world-class apparel plants in India.

Superior quality of Chinese apparel

Interviews with major Western apparel purchasers indicate that Chinese garments are perceived to be of better quality than Indian apparel. Furthermore, India's presence in the jerseys and suits segments is limited because the quality of the fabric produced in India is not good enough for such garments. Jerseys and suits require "heavy" fabric, which cannot be manufactured by powerlooms. Also, powerloom fabric is inconsistent across lots and therefore unsuitable for many export markets such as the US.

Superior delivery performance

Chinese exporters have much lower lead times (2-3 weeks as opposed to 6-12 weeks in India) and much higher adherence to delivery schedules compared to Indian exporters. The long lead time from India is a result of long delays at customs and long turnaround times at ports.

This long lead time is true for all export sectors but is particularly critical in sectors such as apparel where fast-changing fashions make speed-to-market extremely critical. Many buyers, therefore, prefer to turn to Chinese manufacturers rather than to Indian ones.

Indian companies can take three steps to improve performance

Indian companies in the apparel sector should overcome bottlenecks to growth through three targeted actions. First, these companies should catalyse the creation of new mill capacity and should tie up with these mills to procure fabric. Second, producers should address specific causes of low labour productivity and benchmark themselves with world-class plants to improve their cost structures. Specific steps to achieve this could include setting up new world-scale plants; introducing productivity-linked wages in these plants; and increasing the use of contract labour in these operations. Third, Indian players need to significantly step up their marketing presence, particularly in non-quota markets, where their presence has historically been low. In addition, producers should focus on production of jerseys, jackets and suits in order to grow exports significantly.

It is imperative for Indian apparel players to take these steps immediately if they are to survive in the exports markets after the removal of exports quotas in 2005. ■

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