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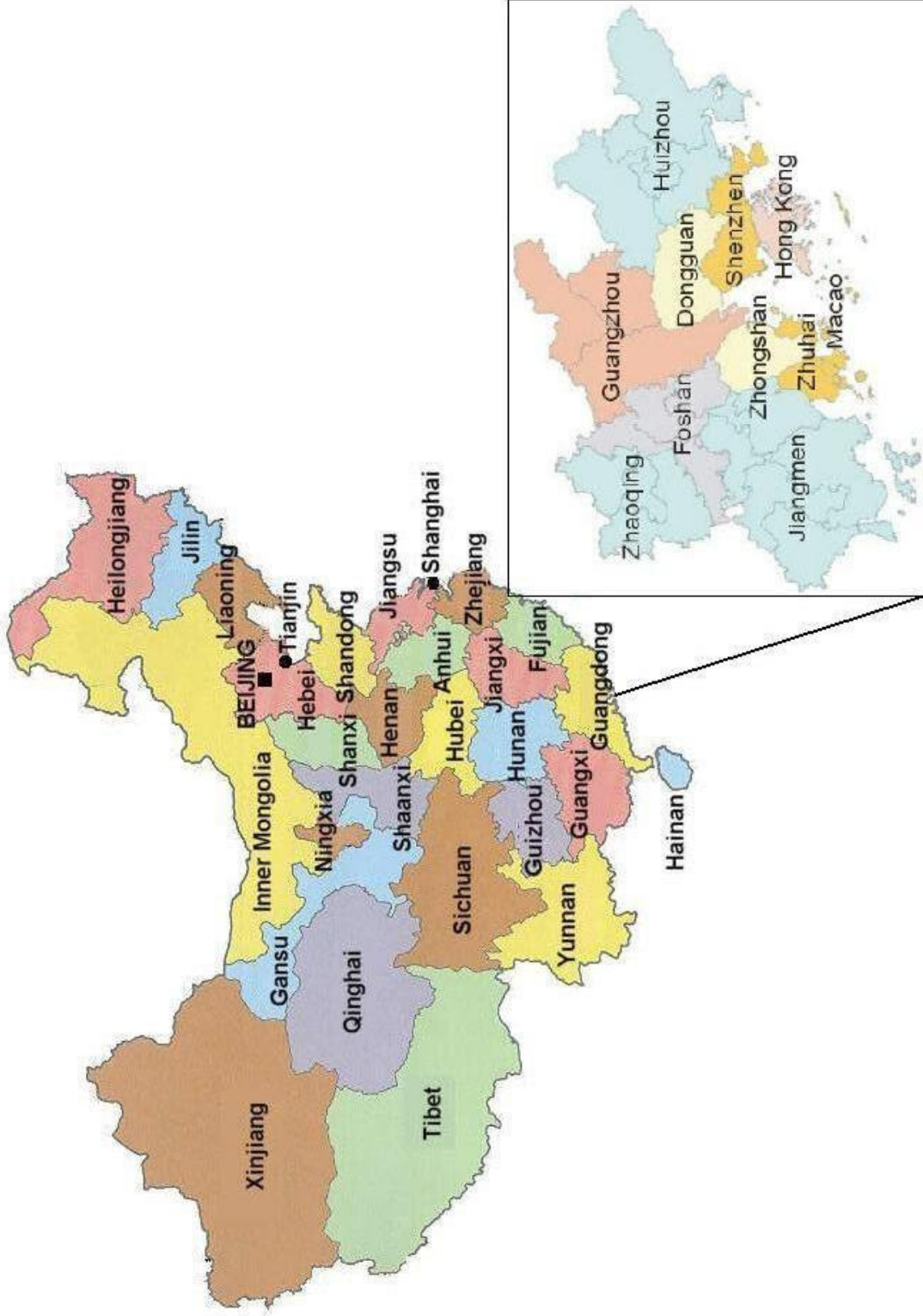
Dynamics of Special Economic Areas in South China Industrial Upgrading and Improving Working Conditions

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CHINA AND THE PEARL RIVER DELTA



Abstract

Since the late 1970's, China has rapidly increased its exports of industrial products and inflow of foreign direct investment (FDI) through the use of special economic areas (SEA), which offer special benefits to foreign investors and export producers. Common criticism against these SEAs, usually states that these areas show persistent low-standard working conditions and wages to remain competitive in the global and local markets. Much of this criticism is based on an assumption that industry and foreign investment is highly sensitive to increasing costs associated with improving working standards and wages and that incentives to upgrade industry are low, if production is mobile.

In this paper, it is found that the cities in the study have been able to rapidly up-grade industry to include modern sectors and the use of skilled labour has become more important. This industrial advancement has brought stronger incentives to train and retain workers in the company through various incentives. Industrial upgrading, corporate codes of conduct, consumer pressure, national competition for workers and rising prices in the coastal areas have contributed to some improvement of wages and working conditions, also in more traditional and labour-intensive industries.

The vast reserve of workers from rural areas and the Chinese household registration system have persistently contributed to keeping wages from rising. This, and the fact that the relatively labour-intensive industries still contribute significantly to employment, and arbitration in implementation of labour laws, has created a situation where wages and working conditions differ very much, also within a small geographical area. The high level of integration between the relatively well controlled SEAs, and the host economy, permits better working conditions in zones, partially due to sub-contracting of simple industrial processes.

Of the three cities, Shenzhen reveals a relatively developed, export-based economy, with pioneering labour management reforms. Dongguan resembles the former, with similar export dependant sectors, but has not yet reached the same level of development in terms of industrial advancement, productivity and wages. Guangzhou stands out as the most diverse economy, resting on the socialist heritage from before the open door policy. All locations show progressing working conditions and industrial advancement alongside traditional production in labour intensive industries. Dongguan remains the location most associated with poorer working conditions.

Keywords: Special economic areas, China, labour, working conditions, industrial up-grading

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List of abbreviations

ACFTU	All-China Federation of Trade Unions
BF	Bonded Factory
BW	Bonded Warehouse
BZ	Bonded Zone
CIT	Corporate Income Tax
CLL	Chinese Labour Law
CPC	Communist Party of China
EPZ	Export Processing Zone
ETDZ	Economic and Technological Development Zone
FDI	Foreign Direct Investment
FFE	Foreign-Funded Enterprise
FIE	Foreign-Invested Enterprise
FTZ	Free Trade Zone
GDFTU	Guangdong Federation of Trade Unions
GOV	Gross Output Value
GDP	Gross Domestic Product
HTDZ	High Tech Development Zones
HNTIDZ	High and New Technology Industry Development Zones
IEZ	Industrial Export Zones
ICFTU	International Confederation of Trade Unions
ILO	International Labour Organisation
IRS	Increasing Returns to Scale
LDC	Less Developed Country
NGO	Non-Government Organisation
NPC	National People's Congress
OCEZ	Open Coastal Economic Zone
OCC	Open Coastal City
OCEA	Open Coastal Economic Area
OECD	Organisation for Economic Co-operation and Development
PRC	People's Republic of China
PRD	Pearl River Delta
PRDER	Pearl River Delta Economic Region
PRDOER	Pearl River Delta Open Economic Region
R&D	Research and Development
RMB	Ren Min Bi (currency)
SACOM	Students and scholars against Corporate Misbehaviour
SC	State Council
SEA	Special Economic Area
SEZ	Special Economic Zone
SOE	State Owned Enterprise
SSTC	State Science Technology Commission
SYB	Statistical Year Book
TNC	Trans-National Corporation
TVE	Township and Village Enterprise
USD	United States (of America) Dollar
VAT	Value Added Tax
WTO	World Trade Organisation
YRD	Yangze River Delta

Chinese terminology

Dagong mei – “Working sisters” (migrant workers)

Guanxi – Personal and professional network

Hukou Jidu – Household registration system

Min gong – Peasant workers (migrant workers)

RMB (Ren Min Bi) - Chinese currency. The currency unit is Yuan¹

San la yi bu – Usually small enterprises involved in simple outward processing

Tongxian – Group identity based on ethnicity, language, kinship etc.

Wai lai gong – Migrant worker(s)

¹ The current rate is 100 Yuan = € 9,87 or SEK 90,50 (calculated from Forex rates, www.forex.se, 2007-01-21)

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1.0 Introduction

1.1 Background

Since the first special economic area, or export processing zone, was established in Shannon, Ireland, in the 1950s, the number of such zones has increased rapidly, and now employ several million workers world-wide. The method is used in developing countries as a way to boost export-led industrialisation, but is often criticised for mainly benefiting trans-national corporations at the expense of host countries and particularly the workers in those regions. Zones have been accused of attracting international capital by undercutting each other in production costs, resulting in permanent low value-added activity with few benefits of "real" industrialisation.

As China entered the stage through a series of reforms in the late 1970s, the huge country came to dominate this type of production within a short period of time. Made possible through internal migration within the populous country, close to 90 % of the special economic area workers are found in China today and their working situation has been repeatedly brought to international attention during the last couple of decades.

In a few years, China's rapidly growing economy has gone from being associated with simple manufacturing, mature products and cheap copies to an economy that is swiftly entering into advanced industries and where the need for skilled workers seems to have taken off. This dynamic development is creating new industrial environments in China, but the country still provides world markets with many mature manufactured goods as well.

The fast, market oriented economic growth has also created a dual economy, with huge differences among locations. From this huge country come numerous reports, telling us very different stories of what China's international role is doing to industrial development and how it affects the lives of workers in the special economic areas and their Chinese city hosts.

1.2 Aim of study

This paper looks into some of the criticism associated with various forms of SEAs and that is often closely related to the mature, "foot-loose" and "labour oppressing" aspects of industry in such zones. The focus is on three locations, Guangdong, Shenzhen and Dongguan in the Guangdong province in South China, to see what kind of industry these cities attract, how it has developed and how it distributes or redistributes over time. This paper also looks into the potential for competition in low working standards and whether the locations have targeted competition through cheap labour and lax labour regulations and how they depend on skilled

or low-skilled labour. The theoretical framework consists of elements from the new economic theory, which adds to the traditional incentives for location and the “*EPZ phases of development*” documented in the ILO “*EPZ Project*”. The latter suggests a potential path of development of labour conditions in special economic areas, but focuses less on the external influences that initiate and sustain them. Together they may offer a more detailed picture than that usually portrayed in articles regarding zone employment and industry.

1.3 Disposition

This paper starts with a general description of the special economic area concept and the functions, incentives and common criticism of SEAs. A theoretical approach to SEAs follows, using a framework developed by the ILO Project on Export Processing Zones and elements of new economic theory. The next section describes the early development and specialisation of industry and SEAs in the relevant region, up to the present time, followed by a description of working conditions and labour management patterns in the locations studied. The paper ends with a concluding summary.

2.0 Special Economic Areas: Theoretical Considerations

2.1 The Special Economic Area

Throughout the paper, the term special economic area (SEA), will be used to cover all the various types of economic zones, commonly and collectively referred to as export processing zones (EPZ), export zones (EZ) or free trade zones (FTZ) etc. Where other denominations are used, a specific type of zone is referred to. The concept of SEAs covers a number of zone definitions, such as industrial export zones (IEZ), free trade zones (FTZ), special economic zones (SEZ), bonded warehouses (BW), high-tech and development zones (HTDZ) etc. Although SEAs appear in different forms, they share some important features. The zone can, in general terms, be defined as a planned, industrial estate, constituting a free trade enclave in the host country's trade and customs regime and containing foreign manufacturing firms that produce mainly for export and benefit from fiscal and financial incentives (Kuzago & Tzannatos, 1998). That is, zones provide special incentives to attract FDI (foreign direct investment) and regulations promote the import of inputs for export production, originally tied to a specific geographic area. With the increasing number of zones, the types and policies have evolved and become more diversified. Such a development includes attempts to upgrade zones from originally simple processing activities, heavily dependant on low-skilled labour, and promote integrated manufacturing, using both domestic and foreign capital and create highly specialised zones, such as science parks (Sargent, Matthews, 2004). Also, the geographical size and location of zones have changed, granting SEA-status to areas outside of geographical enclaves and including very large zones (e.g. Mexico, China).

2.1.1 Host Incentives

Although the actual benefits of the SEAs are not undisputed, there is a number of common incentives for establishing them.

The SEA can be used as a tool, allowing the host economy to develop or upgrade a national or local industrial base, eventually making it internationally competitive like in the cases of South Korea or Taiwan. Through attracting foreign direct investment (FDI), the industry in the zone can be built fast, by experienced multinational firms establishing production. Domestic industry can "catch up" via technological transfers and development of human capital thorough co-operation, interaction and training in foreign firms. The SEA can also be used as a channel to develop a specific industry, perceived to be of special importance to the host economy. LDC (less developed country) producers may have very limited access

to international distribution channels, which could be supplied by the multinationals' experience and ability to produce for the export market. Thus the zone can be a learning ground for domestic firms, aiming for international markets. If a critical mass of knowledge, technology spill-overs and linkages to the rest of the economy are created, then the zone could function as a catalyst, initiating export-led industrialisation in the less developed host economy (Johansson, 2002). Attempts, using the SEA strategy for development of "backward" regions in an industrialising country, have also been made, but with less beneficial results. Earning foreign exchange was an early argument, as many LDCs were running deficits due to import of machinery and other industrial inputs. The creation of jobs, through attracting labour intensive production, has been of significant importance to fight high unemployment rates especially for smaller countries (e.g. Tunisia, Mauritius). The EPZ may also function as a "testing ground" for market forces or new production methods and industrial policy, before reforms are carried out in other parts of the economy (the SEZs in China are the most prominent examples) (Cling & Letilly, 2001). (ILO,1998)

2.1.2 Firms' Incentives

In order to attract foreign firms and investment, a variety of special incentives are provided in different export processing zone, some of which apply in most of the zones.

SEAs offer simplified administrative procedures for enterprise creation, production and reinvestment, with generous industrial regulation and a minimum of red-tape-procedures. Imports of machinery, intermediates and raw materials, which are used for export production, are duty-free and there are usually significant tax advantages for the enterprises and expatriate workforce. Special foreign exchange arrangements apply, frequently giving total liberty regarding the transfer of funds and non-obligation to repatriate a share of proceeds in hard currencies (Johansson, 2002). A more recent trend is that several host countries actually allow some of the SEA production to be sold domestically (Cling & Letilly, 2001, p. 6-7), making the zone a more efficient way to penetrate developing markets.

Zones offer highly developed infrastructure, ensuring supply of water, power, communication networks and good transportation links. Commonly, the zone is also strategically situated, ensuring access to vital markets. (ILO, 1998)

Usually the SEA labour authorities have a separate system, which deals with regulations and conflicts. Many EPZs offer low wage labour to investors and there are cases where active measures are taken to keep wages down. In most countries, the national labour laws and regulations apply in the zones, although official exemptions may occur. (Johansson, 2002)

The incentives offered do not always target those investors that are particularly beneficial to the host's development, but rather all investors. Depending on government priorities, tax reduction and other benefits could be useful tools to attract investors, contributing to improvement of human capital, social/corporate responsibility programs and transferring attractive technology to local partners, or using locally produced goods and inputs, thus creating links to other parts of the economy. (ILO, 1998)

2.1.3 Attracted Industry and Jobs

The investments in SEAs are concentrated to a small number of countries and heavily dominated by simple assembly and labour-intensive industries, such as textiles, clothing, footwear and electronics (ILO,1998). It is, however, generally agreed that SEA employers pay higher wages and demand higher skilled labour, compared to the host economy. The goods produced are so called "mature goods", production of which is progressively relocated from industrialised regions to regions with lower labour costs. SEAs tend to specialise very much in a single industry, with little diversification. The specialisation depends on early entrant firms and the host's level of development. Thus, clothing and textiles dominate in the poorest, least developed SEAs host countries (Cling & Letilly, 2001). The labour force is typically female, but the male participation ratio generally increases when production is upgraded and wage and skill levels increase. SEAs in some countries rely heavily on migrant workers from other regions or even foreign workers. (ILO, WP/SDG, 2002)

The various zones have mainly received so-called "foot-loose" industry, which means that the type of industry located in the zones rarely requires advanced physical capital or higher labour skills and thus can relocate with relative ease. There is also a trend in manufacturing towards intensifying of sub-contracting (Cling & Letilly, 2001). However, examples of higher diversification of activities can be found and also some increase of investment in service-related production, within computing technology and telecommunications (software, call-centres, on-line data entry) (Sargent & Matthews, 2004). Such trends may bring new requirements and potential for workers in SEAs, in locations that are able to meet the higher demands. It also seems that SEAs specialising in activities associated with relatively more developed technology and use of skill operate very differently and compete through quality and innovation. These firms also adopt higher norms, in terms of working conditions, wages and training (ICFTU, 2004). Pressure for development may have differing effects. Shorter product life-cycles and highly market oriented production have led to increased pressure on plant and labour flexibility as well as factors relating to speed, cost

and quality. The situation puts pressure on governments and firms as well as on employees and the necessity of constant adaptation to markets and competitors may lead to conflicts between the interests of at least one of these parties. (ILO, 1998)

The higher wages paid in zones may be a result of higher worker productivity. It may also be necessary to attract and retain workers with higher compensation, due to the, sometimes negative, image of employment in the SEAs, to compete for more qualified workers, or as part of the company policy, due to consumer opinion. (Cling & Letilly, 2001)

2.1.4 Two Types of Zones

The ILO identifies two “classes” of firms in many of the export processing zones. One type of firm tries to improve competitiveness by developing workers and labour relations and thus use the resource more efficiently. The other type tries to keep costs low by not investing in labour development and “sweating” its workers in order to remain competitive. Often, policy measures are required to create incentives for initiating the development process.

A number of factors influence the development process of labour and labour relations. Foreign or multinational companies often bring with them a specific corporate culture with different labour-management relationship types and may hold beneficial views on human capital development or worker influence. This also indicates potential differences compared to subcontracted production. (ILO, 1998, Human Resources and Labour Relations)

2.1.5 Competition in Working Standards and Wages

The increasing globalisation and the very rapid growth in the numbers of SEAs in the world increases competition for investment as well as in product markets. This would indicate higher competition between what SEAs can offer and a need for firms to find the best conditions for production. (ILO, 1998)

Certain industries seem to be more reliant on factors tied to lower standard working conditions, and these locate production to countries providing low standards for the workforce, according to the International Confederation of Free Trade Unions (ICFTU, 2004). Incentives in this perspective could be exemptions from labour laws within the SEA, lack of enforcement of labour laws, or denying trade unions access to zones. *“In fact, EPZs probably constitute the only large-scale example of voluntary undercutting of working conditions, with the objective of increasing the competitiveness of exporting companies and increasing the attractiveness of the host country in the eyes of foreign investors”* (Cling & Letilly; 2001 p. 28). But according to the ILO, countries have little to gain from competing in labour

standards, as “...it constitutes needless and self-inflicted social and economic harm...”, because trying to attract firms by slicing standards “...is unlikely to have any significant impact on the decisions of foreign investors” (ILO, WP/SDG; §25:iii, 2002). There are also cases showing that competition purely by such incentives has not been very successful, as seen with some of the failed attempts with African SEAs. (ICFTU, 2003)

Some zones have responded to competition by upgrading to more technology intense and higher value added sectors, moving away from standardised goods, to non-standardised goods and adopting a “high mix, low volume” strategy. Among the more extreme cases, is production of so-called “zero-defect” goods, such as medical, aviation or defence products. Modern zones may also have different target markets, or can in some cases cater to a mix of foreign and domestic markets. (Sargent & Matthews, 2004)

2.1.6 Reported Violations of Working Conditions and Workers’ Rights

Working conditions may vary greatly between different countries’ SEAs, or even within the same host country. Although national labour law and regulations usually are applicable in the zones, and many of the host countries also have accepted the core labour standards of the ILO (ICFTU, 2004), there is concern that little interest is devoted to upholding such regulations as it could scare off investors. (ICFTU, 2003)

In cases of legal limitations, they often concern restrictions or prohibition of unionisation within the zones. Also where it is technically legal to form unions, strong resistance against organisation of workers has been found. Combined with weak enforcement of labour law and rights, or lack of zone inspections, workers may be left highly vulnerable, with little influence over their situation. (ICFTU, 2003)

As FDI is considered more mobile in general and specifically for certain industries, foreign firms may have a very strong bargaining position in respect to workers, or even host governments, which could be used to implement positive as well as negative changes (ILO, WP/SDG, 2002). Migrant or female workers are generally considered to have the weakest bargaining position. Lack of formal contracts and the flexibility in dismissing workers, should they try to organise or complain, further reduces workers’ power, as their fall-back positions may be weak (ICFTU, 2004). Employers may delay wage payments, avoid paying full wages, or pay below-minimum wages, e.g., by deducting costs for protective gear, drinking water etc. Another documented problem is that the specified wage requires over-time and that peak seasons may mean inhumanly long working days, resulting in stress, errors and health

problems. The working environment may also be lacking in safety aspects, including insufficient ventilation, exposure to chemicals or fire hazards. (ICFTU, 2003)

Strengthening the ability to apply existing labour legislation and carry out inspections in the zones could improve the welfare of SEA workers and help reduce conflicts and hostility against SEAs. (ILO, WP/SDG, 2002)

2.1.7 Law, Consumer Pressure and Codes of Conduct

Different NGOs (Non-Government Organisation) and networks have played an important role in spreading information about what they consider to be unacceptable working conditions. Especially child labour, excessive over-time and minimal wages have been the centre of attention. If it becomes known that a company, or its subcontractors, uses such means of production, it may be exposed to consumer pressure or boycotts. There are attempts to form a set of codes and guidelines for internationally active firms. These codes are not legally binding, but may in cases be used as a basis for beneficial arrangements, thus giving incentive to implement them. (ILO, 1998)(ILO, ESP, 2003)

The ILO has formed two main frameworks. The “Declaration on Fundamental Principles and Rights at work”, holds particular focus on rights to organize and bargain collectively (Cling & Letilly, 2001). The “ILO Tripartite Declaration of Principles concerning Multinational enterprises and social policy” is a non-binding code of conduct, negotiated between governments, as well as workers’ and employers’ organisations at the ILO. Among other principles, the use of special incentives to attract FDI should not include limitations of workers’ right to organise or on collective bargaining. Also wages, health and safety standards should be ensured at levels corresponding to comparable employment in the country. According to the ILO, there is a trend towards adoption of the codes of conduct. There is, however, little evidence of uniform interpretation, monitoring and application of such codes, as there is no multilateral agreement (ILO, 1998). (ICFTU, 2004)

The “OECD Declaration on International Investment and Multinational Enterprises” is a set of recommendations of the OECD countries’ governments, encouraging the positive effects of multinationals’ operations “in harmony” with the policies of the countries where they are active. The OECD Declaration is not legally enforceable and contains the “national treatment principle” which means that multinationals should not offer less attractive working conditions, wages and benefits than national firms. (ICFTU, 2003)

These declarations are arbitrary due to difficulties in comparing zone production with domestic production in the country, but also because enforcement, or even legislation, may be unclear in many developing countries. (ICFTU, 2003)

2.1.8 The ILO, “Phases of Development”

These phases of development describe alternative views on development of the labour force, where SEAs can either remain in the initial phase or increase efficiency through technological up-grading, human capital development and improved use of the workforce. Developed stages are thought to also bring substantial improvements in working conditions.

The ILO framework suggests a potential development of working conditions within firms, based on observations in various zones. Development is divided into three stages and offers a view of strong variations between SEAs over time and space. (ILO, 1998)

In the first phase, at the time of zone establishment, there is assumed to be a large excess of labour supply, which is treated as a renewable resource. Workers work long shifts with substantial overtime, have minimal influence over their situation and can be easily replaced. The labour resource is used inefficiently, with high rates of errors, labour force turnover, absenteeism and wastage. The relatively short period that employees work is due to harsh conditions, causing burn-outs and “voluntary quits”. Usually, any consultation with workers is lacking. Increasing output means increased pressure on the labour force, until intensification becomes counter-productive and quality as well as productivity fall. The first phase is strongly associated with excess labour supply and low skill and low value added production. (ILO, 1998)

In the second phase, employees are motivated with cash incentives for increased productivity, lower absence and long service with the firm. Some firms provide other benefits, such as free breakfast, free transportation to the factory, or even some medical services, enabling higher coverage of nutritional needs, which decreases fatigue and absence, thus improving health, long-term service and reducing mistakes. Other benefits may include

housing assistance, crèche facilities on the production site, air-conditioning etc. The stronger worker incentives of this phase are assumed to increase quality and productivity. (ILO, 1998)

In the third phase, workers become involved in trying to develop production to meet higher quality and efficiency demands and employees have some degree of influence over their working situation. This shift in labour-relations can take place either as part of a development strategy or when facing a crisis. Worker involvement is carried out by working in teams, with gradual empowerment of workers, sharing information, goal setting and problem solving. Some successful firms have managed to create a sense of partnership between managers and workers, also giving workers a feeling of ownership of results in the firm. Teamwork can in this setting also involve training of the team members in decision-making and leadership. The most developed examples of teams working efficiently and more independently are in capital intensive electronics plants. Workers are trained to discover, analyse and solve problems found in production/products (multi-skilling) and participate in team corporation. Higher independence reduces the need for supervisors. Skill upgrading is thought of as a part of the process, where low-skill positions, with low value added, are gradually abandoned for more skill and capital-intensive production. This could include new activities among firms in the zone, including R&D and more locally hired employees in management positions. Also, training, development and career opportunities are thought to have a positive impact on job satisfaction, further strengthening non-cash incentives. (ILO, 1998)

2.2 Elements of New Economic Theory and SEAs

It would seem that industries generally associated with SEA production suffer more from congestion and diseconomies of scale than benefit from economies of scale in a cluster. Thus, they should be eager to move production if factor prices (labour costs) increase. However, the new economic theory raises some important factors, such as positive scale effects, non-extreme equilibria, non-homogenic industry, imperfect mobility and costs of relocation, which implies that the “foot-loose” assumption may not be generally valid for all SEAs, at all levels of labour cost disparity.

The new economic geography analyses the initial location of any type of cluster, using arguments such as historical accident, access to a port, or small, natural asymmetries in underlying characteristics. For SEAs, the location is determined beforehand as part of an economic strategy, but some of the “natural” centripetal forces, may still be highly valid.

2.2.1 Market Access and Input-Output Linkages

Krugman and Venables illustrate the importance of market access in a core-periphery model with a large country (core) and a small country (periphery), where trade and mobility are less restricted within regions than between them, and increasing returns to scale (IRS) exist. The two countries have the same relative endowments, thus the neo-classical “comparative advantage” is not present, but the bigger core has larger amounts of all endowments. It is found that, under finite, positive trade costs, the core receives a higher concentration of monopolistically competitive firms. (Ottaviano & Puga, 1997)

Market access is determined by tradability and costs of trade for production factors, intermediates and consumer goods. Thus, for very high costs of trade in goods, product market competition prohibits clustering, and for very low costs of trade, factor market competition constitutes an obstacle. If competition increases beyond the advantage of larger market and IRS, firms will exit. The bigger market allows development of large-scale producers, as monopolistic firms can benefit from IRS, with high trade costs for a small part of sales (in the other market). (Ottaviano & Puga, 1997)

There may also be direct input-output linkages between firms. Such backward and forward linkages give rise to pecuniary externalities in the presence of IRS. These externalities occur when a downstream firm increases its output enough to make the market for the input, produced by up-stream firms, expand to an extent that allows for more efficient, large-scale production. In the same way, down-stream firms enjoy a forward linkage if the output increase of the up-stream firm allows higher efficiency. (Ottaviano & Puga, 1997) (Venables, 2001)

The host-SEA links, which could potentially tie production to a certain zone within the host country, are generally assumed to be weak. Thus, this type of linkage will be mainly a question of access to distant intermediate markets and potentially strong links within the enclave. However, labour intensive production, which is affected by wages to a relatively high extent, enjoys relatively few links to other producers in the cluster, which makes production relatively mobile. (Johansson, 2002)

2.2.2 Labour Supply Patterns

The higher inter-sector and geographic mobility of workers is often thought to relieve the pressure on labour demand and labour supply elasticity is generally thought to be higher in LDCs (especially for rural-urban movements) (Krugman, 1995). Naturally, mobility between sectors is likely to be higher, if sectors are similar or require minimal adjustment or retraining

of the workforce. Also, the use of migrant labour may keep costs down in more ways than one, since a larger share of income is likely to be savings (for later consumption, or to send money to family and relatives), causing the impact of the labour source region's price level to be stronger. (Ottaviano & Puga, 1997)

A "thick" labour market creates incentives for localisation close to other producers. The cluster provides a market for skill as firms are more likely to find a choice of workers with suitable skills and workers are attracted by the concentration of potential employers. Locating suitable labour in an isolated location may require more effort, as will a search for new employment if a worker becomes unemployed. Risks associated with specific firms are pooled by a number of firms and workers with similar skills. If there is a higher number of potential employers wanting to purchase skills, then the incentives for acquisition of such skills will also be enhanced. It can be pointed out that even low-skill manufacturing may involve training of a workforce, not experienced earlier in non-traditional production, and thus enhance the human capital stock in the labour force (Johansson, 2002). This means that a sector, which is considered to use a low degree of sector specific (or qualified) labour in industrialised countries, may actually have a relatively high degree of sector-specificity among labour in a developing country. (Venables, 2005)

2.2.3 Industrial Specialisation

The industrial mono-culture, which applies to many SEAs, especially dominating the first phase of an established zone, seems to provide potential for agglomeration through industrial specialisation. This type of agglomeration also depends on the same factors as described before, but has stronger buyer-supplier relationships between certain firms, thus creating stronger intra-sector than inter-sector linkages (Krugman, 1995; Ottaviano & Puga, 1997). Thus, the beneficial effects of clustering influence a certain industry or sector more, whereas the negative effects, such as higher factor and product market competition, affect all equally (given that their cost structures are similar). The labour market supply linkage will also contribute to specialization in one industry. This effect will be stronger if labour is highly sector specific, or if skilled labour is required.

Strong spill-over effects could also speed up specialisation, by increasing the human capital stock, thus enabling the application of other production methods and making the workforce diversified, more sector specific and difficult to replace.

Recorded spill-overs from a zone to the surrounding economy are few, but spill-overs are likely to take place within the enclave to a higher extent. A problem in this context is the

nature of industry, which often consists of simple assembly and does not require much skill or technology. (Johansson, 2002)

2.2.4 Lock-in, Expectations and Consumer Preference

The agglomeration process can create path dependency and “lock-in”, meaning that the established agglomeration becomes more stable and less vulnerable to competition from locations which may actually have bigger potential, but can not develop large scale advantages, or compete with established networks and adjusted infrastructure. This effect will be stronger if industrial expansion is slow and weaker if supply of investment (FDI) is very high (creating over-all expansion). (Venables, 2005)

Also expectations of performance, or reliability, of a certain location are of importance (Ottaviano & Puga, 1997). When an existing cluster breaks up, or some firms relocate, the benefits of a new cluster are not instantly created. During a period of transition, some of the benefits are likely to be lost, thus creating costs of relocation. An extended transition results in such cost during a longer time, but a very swift transition may cause costs, due to investments made in the existing cluster. Venables uses the term “herding”, in describing clustering of FDI-projects, as one project encourages others to follow, via a demonstration effect (Venables, 2001).

With a large share of manufactures in workers’ expenditure, the effect will be stronger, as will the relationship between real wages and the price of manufactures (Ottaviano & Puga, 1997). However, this argument relies on workers creating a local market, which may not be the case in many SEAs and depends on the structure of the workforce and policy.

2.2.5 Cumulative Causation

The mobility of production factors influences the ability for industry to concentrate. Naturally, different factors are mobile to different extents, or not at all. Thus, certain industries will be enabled higher concentration. Apart from geographical mobility, inter-sector mobility will benefit certain industries at certain points in time. In an example, where labour represents the only mobile production factor and two identical regions have the same endowments, they are in equilibrium, but if a firm moves from one to the other the equilibrium is broken. The receiving region experiences higher product and factor market competition, which makes firm profitability decrease. At the same time, the increased consumption possibilities, demand for labour and wages attract workers from other regions. This leads to increased local expenditure and the increased labour supply lowers wages,

making it profitable for new firms to enter, by exploiting linkages to each other's workers and to other firms. (Ottaviano & Puga, 1997)

The scenario requires sufficiently low trade cost, as there is a need to supply distant markets, which is a foundation of SEA production. It is more realistic to view a third region as a source of firms, which breaks the equilibrium between two zones and enforces core-periphery competition. Concerning the market impact of migration, however, the share of temporary, migrant workers (and zone structure) in the workforce must be considered. The higher their share, the weaker the expanding effect on the local consumer market will be.

2.2.6 Dispersion forces

There are a number of factors, such as factor price disparities and non-tradable goods and inputs, which strive to disperse industry. The mobility of workers speeds up and strengthens the agglomeration effects, working through wage disparities. If these disparities do not equalise, they will act as a dispersion force, by relatively increasing production costs where firms are highly concentrated. Increasing wages, combined with IRS, can result in equilibria where agglomeration is less extreme, than an absolute core-periphery pattern, and industry is located in a number of locations. The higher the mobility of labour becomes, the more discouraging is the effect of higher local wages. At low trade costs, location becomes increasingly dependant on the price of non-tradable factors. (Ottaviano, Puga, 1997)

Scarcity of non-tradable goods fuels dispersion as new firms and workers enters into the cluster, increasing demand for such goods and factors as housing and land. (Venables, 2005)

SEAs do not have the stricter boundaries of a country, but the expansion of an enclave may be costly and time consuming, due to needs of transforming insufficient infrastructure, or the nature of the ruling economic policy and administrative system in surrounding areas.

The size of the cluster may in itself create trade costs, not only in the sense that producers need to supply markets, but also because it makes it more expensive to supply large cities with agricultural products. Within the cities, commuting becomes costly and time consuming and other living expenses, such as rents, increase. These congestion effects create negative externalities for residents (Venables, 2005).

3.0 Pearl River Delta: Context of SEAs and Patterns of Production and Specialisation

3.1 Pre-Reform China

In the Eighth Congress of China's Communist Party (September 1956), a socialist economic system was established, based on the belief that all local authorities and administrative departments shared the same ultimate goals and visions and that the central government should organise and supervise production through mandatory plans. By 1953, the first five year plan had been launched to convert privately owned companies into state-owned enterprises, and at the end of the period (1957) more than 90 % of all industrial enterprises were controlled, run and owned by the state. These sometimes very large firms, heavy with bureaucracy, did not adapt to fast changes of their environment, profitability, vitality or competition situations. Rather, they were to fulfil the goals of plans set out by the relevant government department, through a vertical government channel. Plan implementation was carried out by an astonishing number of departments, each controlling a different aspect of industry. Pre-communist-era industrial clusters were broken up and people were relocated to benefit regional self-sufficiency and national security (Zhang and To, 2004). (Cheng, 2003)

Through the reforms known as the "open door policy", market economy was introduced into certain areas (initially closed systems), opening up to foreign investment and trade with increased decentralisation in decision making and appointment of officials. The old system was gradually replaced by a developing "socialist market economy". The establishment of five SEAs, known as special economic zones (SEZ), marked the beginning of the new policy.

The use of SEAs and the ability to compete for foreign investment was originally given to a few locations of little prior economic interest. As these locations developed and the use of SEAs (except SEZs) and preferential policies spread and finally, in theory, became available to all parts of the country, national guidelines and rules for SEAs in China became a necessity. These common directives are greatly influenced by the Guangdong experience. They also share the general features of the "Interim Provisions on Guidance for Foreign Investment" and the "Catalogue for the Guidance of Foreign Investment Industries" formulated by the Chinese government in 1995, aiming to guide investment in a way that also benefits the plans for industrial development (Hong Kong Trade Development Council, 2004).

3.2 Early Development of the Pearl River Delta

The PRD (Pearl River Delta) is today a highly industrialised and densely populated region in the south of China. In the south, lie the former European colonies of Hong Kong and Macao. Further up the delta are major industrial cities, such as Shenzhen, Dongguan, Foshan and Zhuhai and in the delta centre, Guangzhou, the Guangdong province capital. The delta periphery contains smaller industrial towns, agricultural and mountainous regions.

The PRDER (Pearl River Delta Economic Region) was established in 1994, in order to co-ordinate development in the region. In 1992, the possibility of using “special incentives” to attract FDI was expanded beyond the original regions and there was further need to manage the economic development in this respect. The PRDER includes 25 cities, in which Shenzhen, Guangzhou and Dongguan are all included. As early as 1985, some special privileges were given to the cities of PRDOER (Pearl River Delta Open Economic Region), which included the smaller region, consisting of Nanhai, Panyu, Shunde and Dongguan. This policy included usage of foreign funds and the right to set up joint ventures with foreign enterprises. Such privileges had formerly been given only to the SEZ in the province. In this original constellation, Shenzhen and Guangzhou were not included, as the project was formed to promote development in the peripheries of the emerging industrial centres. (Cheng et al 1998)

Through the increased liberalisation, light industry expanded in the region. By the mid-80s, export-oriented industries like food processing, textile, electronics and machine manufacturing had come to dominate (Cheng et al 2000). At the early stages, the “*San la yi bu*” enterprises, involving outward processing, where a common form of joint venture that spread to new parts of the province. Especially Bao’an (now included in Shenzhen City) and Dongguan were particularly noted for attracting such enterprises (Cheng et al, 1998). Soon, however, the poor infrastructure would create problems under increased pressure of rapid development and spreading industry. Especially transport routes and telecommunications were insufficient. Among the large projects undertaken were construction of the Guangzhou-Shenzhen Expressway and upgrading of the older Guangzhou-Shenzhen Highway. The Guangzhou-Ring road was completed, as were the Shenzhen-Shantou and Guangzhou-Foshan Expressways. Later, the Guangzhou-Zhuhai (SEZ) and Guangzhou-Maoming Expressways were built. At the same time, the existing railway networks were upgraded and expanded, constituting the main infrastructural support for development in Guangdong, outside of the PRD. Major investments in power production and supply followed, as the energy infrastructure was soon insufficient to cope with growth. Guangzhou and Shenzhen were especially privileged, but improved infrastructure meant that also other locations could

participate to a higher extent in the export production. Dongguan, being situated between the other two well connected cities, could at an early stage benefit from some of those major investments as well. (Cheng et al, 1998)

During first half of the 90s, distribution of FDI started to drift out of the lesser delta (PRDOER) and the SEZs, which had been the absolute economic pioneers. Guangzhou was the exception that increased its share of the FDI-inflow to the province, regaining some of its former strong position. In this stage, migrants and people from rural Guangdong started to seek employment in collectively owned and township and village enterprises (TVEs) in the periphery of the formal economy. This supply of cheap labour enabled the industrialisation outside of Guangzhou and the SEZs and caused many, very low-value-added industries to leave the PRD early, especially from Guangzhou and Shenzhen (Cheng et al, 1998). Electronics and telecommunications would take on an increasingly important role during the 1990s, especially in the early established locations. Some of the industries, especially textiles and garments that were strong in the 80s, kept playing an important role throughout the 90s and into this millennium. Garments and textiles continued to play an important role for employment and export. (Cheng et al 2000)

In 1995, a new plan was formulated for the future development of the province, where six industries were named as the future pillars. However, many of the light industries, which contributed to the strong export growth, were left out. Later, these were again included in the development plan, although their production technologies were to be upgraded. This early attempt to upgrade the industries in the urban manufacturing centres revealed some of the problems in turning rapid economic growth into rapid development of advanced industrial sectors. The late 90's efforts to promote high-tech industries resulted in making them the focus of preferential policies, increased investments in education and research and the setting up of a risk capital fund. Pledges were also made to better protect intellectual property rights. Shenzhen was the first city to develop high-tech industrial sectors on a large scale. Other Guangdong cities that followed were Guangzhou, Zhongshan, Huizhou, Foshan and Zhuhai. (Cheng et al 2000)

Several other problems regarding development and growth arose at an early stage. Although decentralisation and increased ability to drive development and the market economy were vital elements in the explosive growth in the region, the lack of co-operation resulted in fierce competition, which reduced exporters' profits and caused a waste of resources, following the redistribution of materials and people and the eventual near-collapse of some producing industries (Cheng et al 1998). Such a situation could also promote harmful

competition for FDI, as individual locations would not absorb negative externalities. The rapidly rising demand for electric power also revealed great inefficiency and lack of co-ordination in production. The strongly increased demand was met at local level, resulting in inefficient production and unnecessarily high levels of pollution which are problems that partially persist and reflect the difficulties of rapid and unbalanced growth in the region (Barron, Hong Kong).

Competition among locations spurred infrastructure development, due to the need to connect the various production sites and enable exports and development of hinterlands. At the same time it created risks, as all cities made demands to become “centres”. To avoid market failure and too much competition, a new economic plan, aiming at increasing regional co-operation, was introduced, following a much celebrated visit by Deng Xiaoping to Guangdong in 1992. The province was to achieve basic modernisation and to catch up with the four little dragons. Different locations in the province were to target different markets and the co-ordinating role of the Guangdong government was enhanced. At the same time, increasing national focus was put on developing the Yangtze delta Region (YRD), the economic region surrounding Shanghai, which meant that Guangdong was very likely to receive competition from other parts of China as well. Also, reforms of uniform national rules governing finance and foreign exchange meant that the role as a more or less sole pioneer was fading for the PRD, thus further spurring the need of regional co-operation. (Cheng et al 1998). This in many ways marked a change for development in the region, as competition, seen as harmful, was limited through central directives for SEAs and regional co-operation. At the same time, renewed authority of the provincial governments meant better means to control important aspects of the rapid industrialisation. Through regional co-ordination and increased focus on international and inter-provincial competition, the risks associated with regional competition could be reduced at an early stage, also reducing incentives for “race-to-the-bottom”-like scenarios.

3.3 Function and purpose of Guangdong Special Economic Areas²

The Chinese SEAs in certain regions, such as the PRD, allow for interaction with the host economy to a relatively high extent. This makes them differ from the general design of many SEAs and it may be particularly important, as it affects the ability for FDI-induced industry to spread. It is also important as it relieves pressure on firms to exit and permits further

² Information about SEAs in China has been gathered from the China investment Manual (Donald and Lewis 1998) and Investment in Greater China – Opportunities and Challenges for Investors (CCH 2003).

specialisation, as integration lowers trade costs by enabling inter-zone linkages, as well as market expansion through partial access to domestic markets. The integration of zones into a larger economic area also allows for use of combined beneficial treatment in some cases.

Fiscal incentives are an important feature of the SEAs. For non-zone locations, the standard national and regional tax levels apply, with the exemption of encouraged industry.

Stricter customs control applies in zones. Enterprises have to establish accounts and record inventory, assignment, transfer, sale, processing, use and loss of all goods and articles entering or leaving the zone. Enterprises also have to supply customs with relevant statistics of their activity. The customs have vast authority of inspection, but supervision should be simplified, efficient and inflict less time-consuming bureaucracy on enterprises operating under zone regulations. This affects locations differently, giving authorities better control where actual, or typical, SEAs are established within strictly defined geographical areas (Guangzhou and Shenzhen), as opposed to the use of preferential policy applied to certain types of industry or applied to the entire area belonging to city administration (Dongguan).

SEA evolution in the region has moved towards targeting more advanced, skill and technology intensive industries, large projects and projects benefiting infrastructure development, whereas older zones had more general aims of attracting all types of industry. The same applies to investment policies, not tied to specific SEAs. In both cases, much of the initial incentives for less developed industries still apply.

3.3 Major Incentives for Producing FIEs by Type of Zone (national directives)³

Type of zone	ETDZ	HTDZ	EPZ	BZ
Corporate income tax (CIT)	15%			
Limited period reductions of CIT	2 years exemption, followed by 3 years reduction by 50 % (starting from profit-making year)			
FIEs using advanced technologies	3 years of additional reduction by 50 %			
Export oriented FIEs	Effective CIT rate of 10 % for years with export of at least 70 % of produced value			
Local based CIT	Exempted			
Import based VAT for self-use equipment and inputs	Exemption for encouraged industry		Exemption	
Duties and VAT for imported materials	Exemption for bonded materials in processing trade		Exemption	
Domestic sale, products from bonded inputs	Taxed as finished product			Tax based on imported inputs
Exemption of licence for imported materials	For encouraged industries in processing trade		For processing trade	
VAT refund for exports, containing Chinese materials	Upon export		Upon zone entry	Upon export
Bank guarantee bond under processing trade	Required		Not required	
Tax refund for reinvestment	40 % of CIT paid for general reinvestment. 100 % of CIT paid for investment in export-oriented and technologically advanced FIEs			

Source: Wenger, 2003; CCH, 2003

3.3.1 Open Coastal Economic Zones (OCEZ)

Established in the mid 80s the PRD zone was later expanded to the OCEA (open coastal economic area), which includes the three cities. The OCEZ fill the traditional, economic growth or basic industrialisation aims of SEAs and are relatively undiscriminating when it comes to industrial sectors and enterprises, in the sense that all industries may qualify for establishment (except for restricted industries). Still, preferential treatment has been tailored to particularly encourage certain investments, including technology or know-how-intensive production, industry contributing to development of energy, transport and port construction as well as long-term, large investment projects. Unlike some municipalities (Guangzhou) and the SEZs (Shenzhen), OCEZs do not have direct authority to exempt enterprises from local enterprise income tax or grant additional tax reductions without approval from the local

³ These national directives can be viewed as a minimum of the preferential policies listed. Some flexibility remains for the individual location and policy based on category of industry and other terms may influence actual benefits granted to FIEs (See 3.5 *Preferential Policy Profiles*).

government, or State Council (SC). Additional preferential policy may be utilised at local level, for projects deemed particularly beneficial for development (projects involving technology transfers and upgrading). This additional flexibility allows the OCEZ to compete with the more specialised SEAs, if there is a base for development of relatively modern industry.

3.3.2 Bonded Zones, Factories and Warehouses

The bonded zone (also known as a free trade zone, FTZ) is comprised by a restricted area, but bonded warehouses or factories can be operated outside this area under customs authority supervision. The main advantage is that goods and inputs imported into, or out of the zone, (but not to other parts of China) are not subject to VAT and other import taxes. Exempted articles include machinery, equipment and basic construction materials for infrastructure, production equipment, administrative equipment, office equipment, fuels for production, construction materials for factory -or warehouse construction, raw materials, components, parts and package material for export processing. For most goods, there is also an exemption from export tax.

Goods inside the BZ may be transferred between firms, as long as it is recorded with the authorities. Under customs supervision, goods from abroad or from non-bonded areas can also be exhibited in the zones.

In-zone enterprises may commission outside enterprises to carry out processing or themselves carry out processing for outside enterprises under the following conditions: Where non-bonded zones are commissioned, the main work process must be carried out in-zone. Goods finished out-zone must be returned to the BZ, and products finished in-zone must be returned to the non-bonded firm.

Foreign exchange is regulated by separate regulations (Requires foreign exchange fund). The enterprise may retain or sell foreign exchange to a designated foreign exchange bank in the zone. Wages of expatriate employees may be remitted abroad after payment of taxes.

Bonded factories and bonded warehouses are not zones in the same sense as other SEAs, but are classifications assigned to firms. The main purpose of BW is to facilitate storage of imports and exports or distribution of large quantities of goods to several other firms. Processing or export of such goods to the PRC is not permitted, whereas packaging and labelling are. During time of storage, customs duties formalities may be deferred.

Bonded Factories procedures apply to firms engaged in bonded processing of export goods and BF imports may not be sold, reassigned or exchanged, other than through export. Payment of import duties and tax may be deferred until verification of liabilities at time of exporting the goods. Imported parts and materials consumed in the course of processing are exempted from customs duties and VAT.

3.3.3 Development Zones and High-Tech Zones

Economic and technological development zones (ETDZ) were established with the aim of increasing the use of advanced technology and promoting research and development. The preferential treatment under ETDZ directives, including CIT, local CIT, withholding tax, import/export tax and VAT reductions and exemptions, is relatively extensive for firms qualifying according to the general and local requirements. Thus, this is a SEA-design aimed at specialisation and certain types of industries, although export production is still particularly encouraged.

The high and new technology industry development zones (HNTIDZ) were established late, relative to other SEAs and in large cities and already well developed areas, in order to enable the support of high-tech activity. HNTIDZs are a further step towards specialisation, with less general incentives, generous preferential treatment and stricter criteria for qualification of firms. They symbolise modern SEAs through the focus on developed and specific industries. Unlike in the ETDZ, no import licence is required for imports of materials used for export or in the production process. Enterprises are also permitted to set up bonded warehouses and bonded factories and are exempted from all export duties. A few zones, like in Guangzhou, are governed by local directives (usually by national directives). In order to qualify for preferential treatment, the enterprise must be approved by the relevant authority on local level (State Science Technology Commission, SSTC) or directly by the State Council. The actual qualification process is carried out by local zone authorities, in practice creating some flexibility in decision making for all zones of this type.

To qualify, the enterprise should engage in R&D (Research and Development) activity and at least one activity classified as a sector belonging to “high and new technology” industry. Its responsible persons must be scientific and technical personnel, with an insight into research, development, production and business related to the relevant industry. For those enterprises, engaging in industries supplying the high-tech industries with labour intensive products and services, the criteria for operating in the zone are lower, but there is still a requirement to employ qualified, technical or scientific personnel. The FIEs in the zone

should also invest a certain amount of total annual income in R&D activity and a majority of the firm's income should be generated from "technical income" (according to a broad definition of activities, regularly updated by the SSTC).

3.3.4 Special Economic Zone⁴

The SEZ is the type of zone which enjoys the highest autonomy and has the most developed official structures. It also has the authority to implement reduction and exemption from local enterprise income tax.

Extensive preferential treatment is available to investors and is not limited to producing enterprises, but also covers foreign financial institutions, service industry, representative offices and construction projects. Thus, SEZ criteria are less restrictive than for some other SEAs, but may include other types of SEAs within the larger SEZ. Like the OCEZ, special economic zone authorities are also authorised to grant further preferential treatment to enterprises, in regard to transaction on preferential terms of transfer of advanced technology. Some elements of the preferential treatment may be extended outside of the official SEZ boundaries. This is the case with some areas in Shenzhen, bordering on the zone (i. e. *Bao'an* and *Longgang*).

3.3.5 Implications of WTO Accession and SEAs

In December 2001, China became an official member of the WTO, thus taking a further step towards opening up the country and the economy. With the accession came a number of commitments, such as lowered tariffs, fewer non-tariff barriers and increased transparency in trade policy.

The WTO accession brings some important changes in the legal environment for FIEs. Laws imposing a demand of foreign exchange balance on enterprises are to be abolished (meaning that this can no longer be used to limit firms' import into China). In practise, most FIEs, being traditionally export-oriented, have actually run surpluses. There will be no demand on FIEs for "local content" (meaning that a certain amount of inputs must come from China). The FIEs can purchase freely, with the same regulations as domestic producers and no certain part of production needs to be exported (although there can still be special incentives to make companies export a certain share). The dual price system (discriminating against foreigners) was practically removed prior to accession. China should continue to liberalise the

⁴ More information on SEZ under 3.5 *Preferential Policy Profiles*

service sectors, meaning that the geographical restrictions on investment in service sectors will also be gradually removed. In Shenzhen, the new regulations started to apply on the day of accession in 2001 and in Guangzhou within one year (2002). (*Xiaojuan, 2004*)

China is to liberalise several sectors including telecommunications, banking, insurance, securities, foreign trade, transportation, distribution, tourism, legal service and medical service. Some increased liberalisation also includes education, health service, urban infrastructure and prospecting and exploiting sectors. For many of the service sectors, liberalisation should have take place upon accession or within a “reasonable time” after accession (Hong Kong Trade Development Council, 2004). Together with the increased maturity of Chinese markets, these reforms should shift some interest among FIEs towards the service sectors.

3.4 The three cities

3.4.1 Guangzhou

Guangzhou, an old city with a permanent population of some 7.2 million people (about 12 million in the metropolitan area), is the capital of Guangdong province. Situated in the north of the Pearl River Delta, Guangzhou lies close to the geographical centre of the province. The city has played an important role in international contact and trade during various phases in ancient and modern history. Present day Guangzhou includes 10 districts and two cities at county level (*Conghua* and *Zengcheng*).

Guangzhou is connected to a well developed net of infrastructure, with one of three Chinese main international airports, 4 major sea ports (very large ports, national “grade 1”) and 2 large (grade 1) land ports (Guangdong SYB, 2005). The city is also a major hub in the rail- and highway networks. The Guangzhou International Conference and Exhibition Center enjoys a world wide reputation and attracts large crowds during exhibitions. The centre is the largest one of its kind in Asia and hosts the particularly renowned Canton Fair, which predates the open door policy and was once known as the western world’s window into China. (Cheng et al 1998)

Although Guangzhou benefited from the reforms taking place in the province, its relative importance under the communist era would mean transformation of the city’s structures. Guangzhou established its first SEA during the early stages of reform, with the Economical and Technological Development Zone (1984) in the Huangpu district. The number and types of zones were greatly expanded in the early 90s (Hong Kong Trade

Development Council, 1994), enabling Guangzhou to re-establish itself as a major industrial centre in the region, after being in the shadow of the Shenzhen SEZ. Apart from the Guangzhou Economic and Technological Development Zone, the city hosts Guangzhou Hi-Tech Industrial Development Zone, Guangzhou Bonded Zone, Guangzhou Export Processing Zone, Nansha Economic and Technological Zone, as well as a number of additional *industrial*⁵ zones. For decades, Guangzhou has been a target of foreign direct investment (FDI), with the municipal government as the guarantee for a “wholesome investment environment”, including clear policies and support for investors. (*Invest Guangzhou*)

In the early 90s the major export industries were textiles and garments, electronics, electrical appliances, building material, rubber, food and minerals, mainly to Hong Kong Japan and Singapore. In April 1993, the 15 year plan, which shaped modern investment policy (six pillar industry) for Guangzhou called for focus on hi-tech, light industry, transportation, retail, finance, property and tourism (Hong Kong Trade Development Council, 1994). The general development planned for the city’s future is based on “exploitation in the south, optimisation in the north, extension in the east and association in the west”. A long-term plan to make modern Guangzhou an ecologically developed city, with green areas, has been developed. This concept of ecological cities was formed in view of the urgent need to address the environmental situation in the huge Chinese industrial centres. The plan is also to include architecture, preservation of old city regions and the forming of a new centre in the industry areas of the city, where modern infrastructure has been developed. (*Invest Guangzhou*)

3.4.2 Shenzhen

Shenzhen is a young, coastal city (established in 1979), bordering directly on Hong Kong in the south. Just north of Shenzhen are the cities Dongguan and Huizhou. Due to its geographical situation, the city has developed into a transportation hub in the region, connected through land ports, airports and especially sea ports. Several projects have benefited the already close integration with Hong Kong.

The Shenzhen Special Economic Zone (SEZ) was formally established in 1980 and was granted further economic autonomy in 1992 (Hong Kong Trade Development Council 1994). According to the Shenzhen investment bureau, the city has developed an economy featuring high-tech industry, logistics and developed financial and information services. The city also managed to attract foreign banks and build a financial infrastructure at a very early stage

⁵ Note that this is not a SEA, but a region dedicated to industrial concentration of specialized or general nature.

(*Hong Kong Trade Development Council 1994*). Like Guangzhou, the city holds a well-known industry fair, *The China International High-Tech Result Fair*, which is held annually. (Shenzhen Investment Bureau)

Shenzhen hosts 9 large sea ports (of which 7 are very large, national level “grade 1” ports) and 39 large berths with more than 70 regular international container lines. The fourth largest container terminal in the world is found in the city (Wikipedia/Shenzhen). The city is directly internationally well connected, but also makes much use of the connections of neighbouring Hong Kong, with which there are numerous links for cargo and passenger transportation. The international airport is situated in the Bao’an district and has opened a large number of, predominately domestic, flight and cargo lines. Shenzhen also hosts four major land ports. Through modernisation and automatisisation of port facilities, efficiency and capacity has been increased, especially for those ports linking Shenzhen to Hong Kong. For national communications the city functions as a hub in a network of highways and expressways and two main domestic railway lines intersect in Shenzhen. Connections with the Yangtze River Delta (YRD), surrounding Shanghai, are well developed through rail and expressways.

Having been established late, Shenzhen did not have the institutional and economic heritage of Guangzhou, dating from the centrally planned economy. Thus, infrastructure could be adapted to modern requirements. With the opening economy, Shenzhen has also been pioneering in developing and reinforcing the legal system in respect to intellectual property and labour regulations. The municipal government of Shenzhen has put focus on forming institutions to uphold legislation and exact punishment for infringement of property rights, to enable increased investment in certain development sectors. Defined as investment target industries are the four groups of high-technology, logistics and infrastructure, finance and tourism, with particular focus on developing industries of computers and parts, large-scale integrated circuits, network and communication, soft-ware, digital household appliances, bio-engineering, new materials and environmental protection. For other sectors, technology and human capital should be intensified in production. Finance, infrastructure and other supportive sectors are also encouraged. (Shenzhen Investment Bureau)

The SEZ includes urban Shenzhen (the districts of Bao’an and Longgan have been included in the administrative city of Shenzhen, but are not fully incorporated into the SEZ). The municipal government is located within the zone (*Futian district*) (Wikipedia/Shenzhen). Apart from the SEZ, the city also hosts other types of zones. The high-tech industry zone includes several sub-areas, specialising in different sectors, such as development of electronic

information industry, bio-industry, medicine, optical electromechanical integration and new materials. The *Lixian Cave area* focuses on development of integrated circuits and communication equipment. The *University City Area* combines education, production and research. Other high-tech areas include *South Guangming Area* and *Baolong Area*. There is also an *Ecological Agriculture Area*, for development of modern agriculture and ocean resource development (e.g. tourism). The *Municipal Grand Industrial Area* focuses on development, high-tech industry and supporting tertiary sectors. Shenzhen contains several municipal bonded areas, following standard national guidelines. These are strategically placed, to connect efficiently with Hong Kong via the *Yantian* port. The majority of these bonded areas are specialised towards different sectors. The city also contains a closed area for processing industries, the Shenzhen EPZ. (Shenzhen Investment Bureau)

3.4.3 Dongguan

Dongguan is situated just north of Shenzhen, to the south-east of Guangzhou. Like Shenzhen, and unlike Guangzhou, the young city's industry developed in post-reform Guangdong.

The city is a national sea port, with one very large (grade 1) port, connected through the river delta and via transshipments through Hong Kong. Dongguan also has 11 customs ports (of which one is a grade one land port) and 4 checkpoints for transition through Hong Kong/Macao. Through its location, Dongguan benefits from developed Guangzhou-Shenzhen, Shenzhen-YRD and Shenzhen-Hong Kong communication lines as well as the developed network of smaller PRD. Through railways, Dongguan is well connected to the mainland, also due to the developed mainland communications of, primarily Guangzhou and Shenzhen.

The newly developed industrial city has seen explosive growth during the last two decades and has become well known for processing and manufacturing. Dongguan started its industrial development with simple manufacturing, processing, sampling and compensation trade in the late 70s and built its industry around textiles, garments, shoes and toys (Xiaojuan, 2004). Some of the industries have developed very complete chains for their products. The computer manufacturing industry is a fragmented industry with a particularly complete chain in Dongguan. More than 95 % of a computer's components are manufactured in the location, but with particular focus on some parts, of which Dongguan produces 20-40% of the entire world supply (Xiaojuan, 2004).

The administrative system regarding investment and economic development differs from that of Shenzhen and Guangzhou, but has come to resemble the SEA system with simplified bureaucratic procedures. Dongguan is situated within the PRD OCEA. However,

the city does not host special zones of the same type found in Shenzhen and Guangzhou, but a large number of industrial parks and districts, for which the city infrastructure has been planned. Out of these, there are some 30 modern, large parks and districts with more developed infrastructure and reliable power supply. They have also been designed to house supportive service and commerce facilities. These districts are under unified management and control and incentives offered to investors follow guidelines valid on national level or those specifically given to locations within the PRD. Some of these parks are highly specialised, to attract high-tech sectors and industries, such as the *Songshan lake Science and Technology Industry Park* or the *Dongguan Shilong National Star Technology-Intensive District* (Invest Dongguan). A municipal department examines and approves most projects and Foreign Trade and Economy offices of townships may compete for investment. The Investment Promotion Centre was established in 2001, in order to promote investment and to provide “one-stop” service to FIEs. This is a further step towards the systems used in SEAs. Dongguan hosts a huge annual fair for computers, communication and consumer electronics, which takes place between the well known Canton Export Commodities Fair (Guangzhou) and the Shenzhen Hi-tech Fair.

Investments to develop education further in Dongguan are being made. The city also invests some attention in improving internal communication facilities, creating a new city centre and establishing ecological parks. In 2005, the city launched its first Sino-American forum on intellectual property rights (thus following the example of Shenzhen) and additional, extensive projects related to the topic. Work is also being undertaken to improve the legal system in accordance with WTO-membership and prevailing international rules and commitments (Invest Dongguan).

3.5 Preferential Policy Profiles

Preferential policy⁶ is tied to type of SEA, type of industry, size of investment and duration of activity as well as the level of economic autonomy of the hosting city, in that some flexibility may be allowed in use of such policies. As Dongguan technically does not host SEAs, the city is limited to the use of special incentives under directives applying within the PRD Economic Zone, in which all three cities are located and which shares many of the SEA features. Guangzhou may tailor further incentives through the various SEAs within the city and can apply the policies of the PRD Economic Zone to other locations in the city. Shenzhen has a

⁶ This section is based on information gathered from the online investment guides of the official investment bureaus of Guangzhou, Shenzhen and Dongguan

different structure. The city can tailor incentives according to directives for its various SEAs, but the SEZ also covers several of these SEAs, thus enabling further of use preferential policy. The zone also covers industrial parks, not individually defined as SEAs, which fall under the general policy of Shenzhen SEZ. Also for the areas outside the SEZ (Bao'an and Longgang), additional preferential policy may be used, as these areas have been granted a partial extension of the SEZ.

Main fiscal benefits usually include a reduction or temporary exemption from CIT, which is levied at 30, 24, 15, or 7.5 %. Local based CIT of 3 % is usually exempted in full. VAT is adjusted from 17% through rebates, giving actual rates down to 2 %. In comparison Shenzhen offers equal or stronger fiscal incentives to all manufacturing, technology-intensive and high-tech industries as well as service industries. In some cases, requirements are stricter.

All manufacturing FIEs are granted some level of preferential policy. Those not categorised as high-tech, tech-intensive or encouraged, are offered the same fiscal benefits in Guangzhou and Dongguan, unless they locate within the Guangzhou SEAs, where they may receive stronger benefits. In Shenzhen, general manufacturing FIEs are granted stronger fiscal benefits than in the other two locations.

The policy concerning advanced development and high-tech industry is the most detailed and it is central to benefits offered on all locations. Thus, the SEAs are actually designed to fit into a system aiming to attract industries, which are perceived as particularly beneficial for the host country. Incentives for FIEs involved in such sectors are added to the incentives granted to general manufacturing or supporting industries.

All manufacturing enterprises in the category enjoy additional CIT reductions for a maximum for 8 years (2-year exemption, 3+3-year partial reduction) for the initial investment. Upon expiry, the rates of each location apply. The greatest reductions are given to FIEs in Shenzhen, followed by, or equal to the Guangzhou SEAs. Further fiscal benefits may be granted to firms transferring advanced technology to enterprises in China, under favourable terms, in all locations. Reduction or exemption of VAT for inputs and equipment is commonly granted, although preference is given to Chinese parts and equipment. Benefits offered to FIEs in Dongguan require approval, if not included in the directives for the OCEA.

Shenzhen distinguishes itself by focusing on benefits for technological transformation development, offering full exemptions of up to 5 years followed by 3 years of reduction. There is also an additional 3-year exemption for all income generated by transformation within a project, regardless of previous incentives. Such policy benefits FIEs with

independent intellectual property rights (provincial/national level new patented product). Local sharing VAT is also reduced during the period of CIT.

Dongguan grants extra fiscal benefits to firms making relatively small additional investments or increasing the cost of technology development. Shenzhen and Guangzhou offer weaker incentives for small, general re-investments, but stronger incentives for re-investment in high-tech and export oriented industries (generally defined as 70% of income generated through export) and for large investment projects.

For export oriented enterprises, a category that also includes processing industries, Dongguan offers preferential treatment after expiration of initial benefits. General exporting benefits and those to encouraged industries, high-tech and technology intensive industry are identical in Guangzhou, but the latter offers stronger incentives in the SEAs, compared to the OCEA. Shenzhen applies a fixed level of fiscal benefits to all export-oriented SEAs. In all cases there are also exemptions from import tariffs and import VAT for export production (via refund).

The three cities also have other specific policy features, which signal the different stages and structures of the locations. Shenzhen has developed beneficial comprehensive policies also for long-term investments in service industries, thus rather encouraging, than restricting foreign investments under the WTO commitments. Shenzhen offers stronger incentives for investments in banks and financial institutions, but requires larger investments to grant benefits. Such criteria and benefits are similar between Guangzhou and Dongguan. Guangzhou has a beneficial policy for FIEs purchasing or constructing commercial buildings in the city, thus creating a stronger tie of attracted industry to the location. Dongguan offers special incentives to FIEs engaged in up-grading of typically traditional sectors (e.g. agriculture or forestry) in underdeveloped districts. This is an element of early stage transformation into modern industry. Although Dongguan has experienced rapid industrialisation, it is still the location that has kept the largest share of its agricultural land.

3.6 Industrial Composition and Specialisation

During the 80s and 90s, industrial operation and development had depended extensively on foreign capital. This is a pattern, which is assumed to apply to areas using SEAs for industrialisation, primarily during initial phases, as domestic industry catches up, or develops.

In 2001, all three cities relied heavily on foreign capital. Guangdong was the location with the lowest dependency, measured as the share of industrial gross output value (GOV) generated from foreign funded enterprises and projects. In both Shenzhen and Dongguan, the

share was much higher, reaching more than 80 % in Dongguan. Dongguan also had the strongest dependency on capital from Hong Kong, Macao and Taiwan, representing roughly half of the produced value. Thus, the heavy reliance on foreign investment for industrial operation and development remained in all three cities with a majority of capital coming from Hong Kong, Macao and Taiwan, with Hong Kong as the largest single source. (Dongguan, Guangzhou, Shenzhen SYB, 2003)

The industrial structures of the three cities differ, although they share dependency on several industries. In 2001 (see table 3.6), *Transport equipment* represented the largest share of Guangzhou GOV, followed by *raw chemical materials and chemical products*, *electric machinery and equipment* and *telecommunication, computer and other electronics*. Some traditional industries such as *garments, shoes and hats* and *leather, down and related products* still contributed noticeably. It is obvious that Guangzhou, at this time, did not have a single industry of unchallenged dominance, which is often the case in SEA based industrialisation.

Shenzhen focused production towards *telecommunication, computer and other electronic equipment*, which represented more than half of the city's GOV. Related industries, *electric machinery and equipment* and *instruments and meters* followed in second and third places. Thus, the Shenzhen economy was extremely specialised towards a certain sector and also highly dependant on foreign capital and theoretically fitted into the risk category of common criticism against SEAs. The fact, however, that the dominating industry was relatively capital and technology intensive, made Shenzhen differ from the typical SEA-initiated "primary entrant" industry, which often comes to shape and dominate SEA production. Dongguan had, like Shenzhen, a single sector, *telecommunication, computer and other electronic equipment*, which clearly dominated production with about a third of industrial GOV, but the focus on this single sector was less extreme. The other significant contributors were spread across various industries, with *textiles* being second and *electric machinery and equipment* the third largest in terms of output value. The latter sectors did not contribute as much in the other two cities, but did so at earlier stages of their industrial development (Cheng et al 1998). The range of industrial activity in Dongguan likely reflected lower specificity in production, that is, steps in production requiring less capital and less skill than the same sectors in the other cities. At this point, the Dongguan industry was the one most resembling first entrant composition. Shenzhen reflected a second phase of higher specialisation in combination with more advanced production and Guangzhou showed a mix of dependency on first entrant industries in combination with heavy industry sectors, the

origin of which is not primarily traceable to FDI, but to Guangzhou's industrial heritage from the communist era. Overall industrial specialisation calculated in the cities in 2001, with the Herfindahl index, shows low to medium strong specialisation in Guangzhou, medium to high in Dongguan and extremely high specialisation in Shenzhen.

3.6 Composition of Gross Output value (GOV) by Ownership and Sector, 2001

By ownership	Guangzhou	Shenzhen	Dongguan
Total	100.00	100.00	100.00
Foreign funded other	24.80	33.50	29.96
Funds from Hong Kong, Macao and Taiwan	34.60	46.35	52.50
Total foreign funded	59.39	79.85	82.45
By Sector	Guangzhou	Shenzhen	Dongguan
Food manufacturing	3.52	0.44	1.25
Textile industry	3.17	1.42	8.09
Garments, shoes and hats	4.89	1.37	4.06
Leather furs, down, related products	4.37	1.02	2.66
Furniture manufacturing	0.73	0.80	1.13
Papermaking and paper products	2.36	0.89	4.54
Printing and record medium reproduction	0.79	1.11	1.21
Cultural, educational and sports goods	2.00	1.35	3.73
Raw chemical materials, chemical products	10.71	1.65	3.04
Medical and pharmaceutical products	2.18	1.72	0.36
Plastic products	3.41	3.27	4.29
Non-metal mineral products	3.27	1.37	2.22
Metal products	3.69	2.99	3.31
Ordinary machinery	2.09	0.34	0.67
Special purpose equipment	0.78	0.80	0.56
Transport equipment	12.03	1.32	0.64
Electric machinery and equipment	7.08	6.07	7.19
Telecommunication, computer and other electronic equipment	7.31	51.10	33.72
Instruments, meters, cultural and office machinery	0.69	5.50	1.37
Other Industries	24.93	15.51	15.96
Calculated Herfindahl Index (See box below)	0.11	0.30	0.16

Source: Dongguan, Guangzhou, Shenzhen SYB, 2003

Herfindahl Index

$$H = \sum_{i=1}^n (s_i^2)$$

Low concentration: $H < 0.10$ S_i = Share of total production
 Moderate concentration: $0.10 < H < 0.18$ n = Number of sectors
 High concentration: $H > 0.18$

By 2004, the overall industrial specialisation of the three locations had increased further. According to the Herfindahl index, the industrial concentration in Guangzhou was

medium strong, whereas Dongguan and Shenzhen show high concentrations of industry to a few sectors.

The importance of FIEs in Guangzhou had increased further, whereas the relative importance of enterprises funded from Hong Kong, Macao and Taiwan decreased, meaning that other foreign investors had come to dominate. The relative importance of FIEs in Shenzhen remained very close to the level of 2001, but with an increasing share of investors coming from Hong Kong, Macau and Taiwan. Dongguan remained the most extreme, as FIEs accounted for roughly 86 % of GOV. Investment from Hong Kong, Macau and Taiwan remained dominant. Particularly Hong Kong has led in “herding” FDI projects outside of Guangzhou and through its close connection to the region, it has contributed significantly in shaping, particularly, Shenzhen and Dongguan.

In 2004, *transport equipment* increased its share of Guangzhou’s GOV, and remains the highest contributor, followed by raw chemical materials and telecommunication, computers and other electronic equipment, which represents strong growth in the latter. Since 2001, the contributions of early dominating sectors, such as *textiles, garments, shoes and hats* and *leather, down and related products* have continued to decrease, as has the share of *electric equipment*. The nominal output value, however, still increased also in these sectors. The pattern shows increasing specialisation in advanced sectors, indicating steps further away from what can be considered a mere manufacturing base. Heavy industries are more reliant on large scale operation, whereas the electronics sectors are likely to be a result of its strong presence in the region, creating incentives for local segmentation.

During the same period, the nominal output value of Shenzhen’s primary sector, *telecommunication, computer and other electronic equipment*, more than doubled and the sector came to represent an even larger share of GOV by 2004, thus strengthening specialisation further. Dependency on *electric machinery* and *instrument and meters* decreased, despite strong nominal growth in both sectors, as did reliance on *plastic products*. The specialisation is enhancing a structure resembling an industrial mono-culture, but within a relatively modern industry.

In Dongguan, *telecommunication, computer and other electronic equipment* continued to increase its contribution to total industrial production. The importance of *electric machinery and equipment* and *instruments and meters* also continued to grow significantly. During the same time, *plastic products, garments, shoes and hats* and especially *textiles*, decreased their shares. Thus, Dongguan assumes an industrial composition further resembling that of Shenzhen and even more so, Shenzhen’s previous composition, following the same

trends of development in choice of industry. This adds to the pattern that Dongguan has “inherited” industry and investors, spilling over from Shenzhen. There are elements of first entrant structures, but a second wave of investments is more likely to describe the current state. This has largely been benefited by the influences of Hong Kong and other Asian countries, which developed a few decades earlier. It seems that the sector *telecommunication, computer and other electronic equipment* is associated with strong, positive scale effects, as it has developed into an important part of production in all three cities. The related industries of earlier stages, such as *electric machinery and equipment* and *instruments and meters* have grown in nominal terms, but their location has been shifted, primarily towards Dongguan, indicating stronger congestion effects.

The Shenzhen economy has come to depend mainly on large scale enterprises in industrial production, with a relatively small portion of small firms, thus further benefiting large-scale production patterns. Guangzhou has almost equal parts of the large, medium and small sized enterprises, with medium sized enterprises being the largest group. This is not surprising, giving the mixed industrial composition in the city. Dongguan also depends mainly on production in medium sized enterprises, but has the lowest dependency on large firms. Generally, those industries that benefit from large scale and high concentration of production are less sensitive to wage competition from other locations, as the agglomerated location creates its own benefits.

3.6.1 Composition of Gross Output Value, by Size and Ownership, 2004

Composition of Gross Output Value (GOV), enterprises over levels 2004			
City	Guangzhou	Shenzhen	Dongguan
GOV composition by type of firm (%)	100	100	100
Domestic funded firms total	34.08	20.86	14.46
Domestic state owned	5.09	1.17	1.79
Collective-owned	3.44	0.23	3.72
Private-owned	-	0.02	-
Foreign funded firms total	65.92	79.14	85.54
Hong Kong, Macau, Taiwan funded	27.48	51.95	51.32
Other foreign funded	38.44	27.19	34.23
Export dependency	0.2856	1.1914	1.3493
GOV composition by firm size (%)			
Large	29.98	48.91	20.06
Medium	37.47	33.76	54.18
Small	32.55	17.33	25.76

Source: *Guangdong 2005 Statistical Yearbook*, *Shenzhen 2005 Statistical Yearbook*

3.6.2 Composition of Gross Output Value by Sectors, 2004

Composition of gross output value (GOV) by main industrial sectors (%), 2004			
City	Guangzhou	Shenzhen	Dongguan
Light industry	45	27.75	45.93
Heavy industry	55	72.25	54.07
Food manufacturing	2.66	0.41	0.88
Textile industry	2.85	0.64	4.93
Garments, shoes and hats	3.28	1.02	2.27
Leather furs, down, related products	2.91	0.67	2.4
Furniture manufacturing	0.58	0.89	2.52
Papermaking and paper products	1.46	0.61	4.05
Printing and record medium reproduction	0.65	1.22	1.62
Cultural, educational and sports goods	1.28	0.86	3.23
Raw chemical materials, chemical products	13.99	1.11	2.34
Medical and pharmaceutical products	1.38	0.75	0.18
Plastic products	3.09	2.33	3.94
Non-metal mineral products	2.46	0.84	1.22
Metal products	3.18	2.98	2.12
Ordinary machinery	3.07	0.53	0.75
Special purpose equipment	0.9	1.04	0.91
Transport equipment	16.25	1.01	0.76
Electric machinery and equipment	5.32	5.72	11.55
Telecommunication, computer and other electronic equipment	12.44	59.79	36.82
Instruments, meters, cultural and office machinery	1.22	4.69	5.94
Other industries	21.03	12.89	11.57
Calculated Herfindal Index	0.12	0.38	0.18

Source: *Guangdong 2005 Statistical Yearbook, Shenzhen 2005 Statistical Yearbook*

In 2004, all three cities still depended highly on foreign capital, with the lowest relative dependency in the Guangzhou economy and the highest in Dongguan. This relationship is also reflected by difference in export dependency⁷. It is not likely, however, that the mere share of foreign capital explains the entire difference. Most likely, it indicates that FIEs in Shenzhen and especially Dongguan target export production, whereas a larger share of FIEs locating in Guangzhou target domestic markets. In terms of industrial composition, none of the 3 cities fit into the first phase of SEA-development. All cities show diversified industries and do not mainly rely on first-entrant industries or on a single sector. Although Shenzhen and Dongguan rely to an exceptional extent on electronics' industries, and all cities depend highly on mature industries, they show diversification and technological progression within these sectors. The largest (GOV) industry in Guangzhou belongs to heavy industries, which is

⁷ Export dependency calculated as exports per GDP

atypical for all the early stages of SEA-initiated economies and is more likely a consequence of the city's pre-reform industrial role.

3.7 Distribution of FDI

For decades, the inflow of FDI into the PRD, and in particular to the three cities, has increased dramatically. The roles of Guangzhou, Shenzhen and Dongguan as recipients have remained fairly stable, in aggregate terms, for a relatively long period. It seems that many factors, apart from the price of production factors, influence the flow of FDI.

3.7 Distribution of FDI, by Utilised Foreign Capital (2-year average)

Years/City	Guangzhou	Shenzhen	Dongguan
1989/1990	40.12	39.30	20.58
1992/1993	40.12	39.30	20.58
1996/1997	42.67	42.30	15.02
2001/2002	29.19	41.61	29.19
2003/2004	36.42	43.68	19.90
Size of economy (GDP)			
2004 (billion Y)	411.6	342.3	115.5

Source: MacPherson and Cheng, 1996 (original source Guangdong SYB 1991; 1994); Cheng et al 1998, p 112; Dongguan, Guangzhou, Shenzhen SYB 2003; 2004; Guangdong SYB 2002; 2003; 2005

During the period up to 2004, the FDI to the three cities grew at roughly the same pace. The flow of capital can fluctuate heavily from year to year, especially if investment is dominated by large projects, which is the case mainly for Guangzhou. Dongguan established itself as a target for FDI later than the other two, but managed to reach a strong position very early and there do not seem to be any strong trends of capital exiting one location to benefit another, during the period. It seems likely that the high potential for integration between SEAs as well as with the host economy has created a situation where the three cities belong to a common (though not homogenous) core, instead of competing in a pure core-periphery manner.

For many firms, the chief incentive for relocating production to China is access to inexpensive labour, for labour intensive production (Grufman, Shenzhen; Li Dongguan; M. N. Hong Kong). However, several additional factors are mentioned for choice of location within the country, such as the local culture, flexible administration, common language (Hong Kong has a primarily *Cantonese*-speaking population), and early introduction of the “special policies and flexible measures” (Cheng et al 1998). In a study, conducted among primarily

manufacturing FIEs in the mid 90s, determinants for investment in different locations in China were graded and ranked. Most important for Guangdong investors was the huge domestic market potential, followed by low labour cost and preferential tax policies. Untypical for early SEA-investment, some focus was thus already directed towards the domestic markets. Low cost of land and rent was ranked in sixth place and need to extend scale of production was placed seventh. As investment initially was focused on co-operation with local partners, the heritage of overseas Chinese from Guangdong was important, especially in HK. The major determinants of location within the province were (in order of importance) location of the Chinese partner and familiarity with the same, suitable infrastructure, proximity to target markets, preferential policy and availability of relatively skilled labour. The problems experienced by investors in Guangdong were the under-developed domestic market, time consuming approval procedures and low-quality labour force and management. (*Cheng et. al. 2000*)

During the interviews and talks, for this paper, with FIEs and their representatives, all stressed the importance of building and maintaining a personal and professional network to be able to successfully continue activity in China. This applies to firms entering the Chinese market to a higher extent, but is important even for exporting firms. The strong dependency on personal networks affects original choice of location and makes it difficult and costly to relocate, not only due to the potential loss of the own built-up network, but also because future activity may come to depend on the unknown networks of new subcontractors or partners (G.S. Guangzhou). This tendency is enhanced, as actual circumstances of a location may differ between SEAs, or due to special preference or exception granted to an individual investor through good communication with the local authorities. Relocation becomes time consuming and volatile, in particular for industries relying on just-in-time delivery and, or, frequent adjustment of products (e.g. telecommunication, computer and electronic products) (M. N. Hong Kong). Some firms knowingly accepted higher operational costs (mainly wages), in exchange for either a trusted local partner (Blücher, Guangzhou; Kelly, Foshan) or beneficial investment environment with simplified and adapted procedures (Grufman, Shenzhen). The personal relationship with local authorities is even more important for FIEs active within a strictly regulated industry (e.g. environmentally hazardous production) (Grufman, Shenzhen). Associated with the relationship to the local authorities is also the persisting problem of corruption, which has become apparent to many investors in SEAs, as well as outside (this was mentioned several times in informal discussions with domestic and foreign business people, during research for this paper). For those trying to penetrate domestic

markets, proximity to those target markets was also stressed. For Shenzhen, the excellent communications to Hong Kong were mentioned. Choice of location may also affect the ability to attract expatriate workers. As one manager suggested, these may not be that interested in being stationed in the remote farmlands (Kelly, Foshan). The mentioned benefits of Guangzhou, were the higher exposure and better market access offered in this location (Blücher, Guangzhou) and the infrastructure to service specific sectors (e.g. those producing hazardous bi-products) (Pang, Guangzhou). The same argument was used to describe Shenzhen (Grufman, Shenzhen), but bureaucracy is still cumbersome in both locations. Even if modern and high-tech dependant production is targeted, it takes time for procedures to adapt and the legal system is complicated and not uniform. As domestic firms develop, competition is tightening also for the FIEs, including competition from domestic firms through piracy (Kelly, Foshan). Benefits mentioned for Dongguan, included proximity to a large number of producing enterprises in the city as well as in the near-by cities. Production costs (wages and social fees) were perceived to be increasing, but are still considered beneficial in comparison to other large cities in the region (Li Dongguan; Wang, Guangzhou).

During the last years, some of the firms have noticed the stricter environmental -and labour regulations, which have increased costs. However, these are not sufficient to move the industry, due to the dependency on developed facilities, not least those that deal with environmentally hazardous materials and by-products (Grufman, Shenzhen). Chinese firms focus on competition in price, which also makes it difficult for foreign firms in certain industries to compete on the same terms (Blücher, Guangzhou) and thus advantages in price may be considered secondary to other location specific advantages.

3.8 Industrial Dynamics

The Guangdong government has long tried to encourage high-tech industries, but investors were initially slow to reply. Shenzhen continued to hold a leading role in this development in the province, but the technological development level of locations in the region remained highly dependant on FDI, in particular from Hong Kong. The late 90s witnessed transformation of industrial structure and improvement of efficiency in the industries of the PRD. The transformation also started to greatly increase the demand for skilled labour (Cheng et al 2000), thus theoretically enabling the later stages of the ILO development phases. First to upgrade industries, were Shenzhen and Guangzhou. This revealed a problem with the structure of the workforce, as focus had been on low-skill and semi-skill sectors which made it difficult to serve fast-growing advanced sectors.

SEA-led industrialisation is often criticised for its industrial mono-cultures, labour-intensive and low value-added sectors. Although the three cities mainly depend on mature industries, they have all developed mixes with different qualities. Important sectors in the regions modern industry, with relatively high value-added-production, included *telecommunication, computer and other electronic equipment, instruments and meters and transport equipment*. Less prominent sectors with high value-added production include *raw chemical materials and chemical products* and *medical and pharmaceutical products*. The typical low-value added sectors include *garments, shoes and hats, leather, furs, down and related products* and *cultural, educational and sports goods*. The broader categories of textiles, garments, machinery and electronics are those particularly dependent on export, according to customs statistics (Guangdong SYB, 2005).

Of the three cities, Dongguan is growing increasingly similar to Shenzhen in terms of industrial structure, whereas Guangzhou stands out. Dongguan also has about the same size of permanent population as Shenzhen and the two cities were both established during the reform. Despite these similarities, the industry in Shenzhen has a much higher level of efficiency, with an average value added per industrial worker of 127400 RMB per year in 2004, compared to 60172 RMB per worker and year in Dongguan (Guangdong SYB, 2005). Some of this difference may be accredited to higher capital intensity and more dependency on large scale production in Shenzhen, but is likely to indicate also differences within the sectors, meaning that Dongguan is mainly adopting certain stages in the production chain, rather than competing for the entire production process within the same sectors. This is further indicated by the Dongguan development steps, mirroring those of Shenzhen in the past. Average labour productivity of industrial enterprises in Guangzhou was 107077 RMB per person and year in 2004. Guangzhou relies heavily on transport equipment, which includes very high value-added production (231655 RMB/person in 2003) as do *raw chemical materials and products* (365091 RMB per person and year in 2003). Even the traditional sectors, such as textiles, food manufacturing, garments, shoes and hats are relatively efficient, although they are typically low value-added sectors for the over-all chain of production. Due to its high diversity in industries, Guangzhou is the location least fitting the assumptions of SEA-led industrialisation. This is likely a reflection of pre-reform development, the relatively large natural population and the stronger difference between SEAs and non-SEA areas within the city.

The ratio of total assets to production output value was in 2004 the highest in Guangzhou (16.98%), followed by Shenzhen (11.89 %) and lowest in Dongguan (7.69%). On

its own, this measure is difficult to interpret, although it adds to the picture of less developed production methods in Dongguan, with higher labour dependency, as firms in general are smaller scale and value-added per worker is relatively low. These features are all tied to earlier development phases of SEAs, and indicate weaker ability to agglomerate and create increased efficiency, which can outweigh congestion costs. The comparison between Shenzhen and Guangzhou is less clear, as the structure of industry differs more. Difference in firm size, the stronger role of heavy industry in combination with more traditional, low value added sectors in Guangzhou and the age of capital are likely explanations for differing capital intensity and efficiency. Despite underlying differences in the three locations, their shares of FDI inflow seem stable, indicating that there is some balance between higher efficiency in production and low labour costs. This indicates that low wages are not likely the primary determinant of industrial location, although the picture could differ if preferential policy was identical in all locations.

4.0 Employment and Working Conditions

Since the early 90s, the local government has recognised the need for migrant labour and taken measures to ensure the continued supply of migrant workers. The role of SEAs as instruments to reduce unemployment for the host location has long since been surpassed, although they helped absorb former SOE employees at very early stages of development. The heavy use of migrants is associated with the shift in employment structures and conditions in the SEA-hosting cities. In 1997, the Guangdong province had the highest number of labour disputes in all of China, (Cheng et al 2000). Many of the changes followed the shift from state employment to private firms, as SOE employment declined rapidly from having completely dominated industrial employment (Ngai, 2006) and industrial employment also increased.

Parallels between labour system development and the economic development can be found in the different locations of the PRD. The first category contains Guangzhou, mirroring state-led development with a long –lasting dominance of the state owned sectors. The second category contains Shenzhen and reflects the experimental environment, led by large projects, foreign investment and the increased contact with western economies. Dongguan falls into the third category, a “hybrid” or “home-grown” mix of rural and township enterprises and increasingly foreign-invested production. (Cheng et. al. 1998)

4.1 Labour Law

China’s first labour law came into effect on 1 January 1995, formally establishing the “labour contract system”. These contracts state the employer-employee relationship and rights. Breaches of it, delays and fraud can result in the failing party having to pay compensation to the other. The employees’ rights, stated in the contracts, are derived from the constitution of the PRC (Peoples Republic of China) and the Chinese Labour Law (CLL) and include minimum wage, compensation for injuries at work, compensation for over-time, sick leave, annual leave, severance pay, equal treatment of men and women and working hours.

According to the CLL, workers should receive 150-300% of ordinary salary for over-time work and work on statutory holidays. Companies should refrain from terminating employment due to short-term (up to 12 months recovery) occupational injuries or due to pregnancy. By requirement of the CLL, minimum wages are to be set by province or municipality authorities and should not be less than half of the local average wage. FIEs are allowed to autonomously set wage and salary levels for their employees, in accordance with

legal directives. State-owned, urban collective owned, urban private enterprises and FIEs are also required to pay basic social insurance premiums (Cheng, 2003 p. 314-16, 328-29).

FIEs are not allowed to employ migrant workers without authorisation. A worker must obtain an identity card, a temporary residency card and an employment permission card to be allowed to take employment. If a FIE employs someone lacking these permits, it should be considered illegal and could result in disciplinary actions. Under no circumstances may child labour be employed. Collecting identity cards and permits and holding these in custody are not allowed. The company is not allowed to keep deposits from workers or other belongings against their will, as a so called “factory entry pledge”. It is also illegal to physically punish workers, perform body searches and block the workers dorms. (Cheng, 2003, p. 297-99)

To avoid complications, FIEs are advised to strictly follow labour regulations and guidelines, also in SEAs, although disciplinary actions against FIEs that fail to comply with regulations are rarely harsh. In many cases the company may simply be required to pay the money they actually owe to workers or to cease the breaking of regulations but with no specific punishment. Some stricter actions may be taken if the breaking of regulations results in serious consequences and deaths, but not with certainty. Technically, such negligence could result in imprisonment and high fines for those responsible. (Cheng, 2003 p. 342-43)

Supervision and administration of labour law lie with provincial, municipal and special economic zone (SEZ) labour and social security departments. Labour and social security departments at local level are ultimately responsible to the Ministry of Labour and Social Security, which in turn answers to the State Council and then to the NPC (*National People's Congress*, the highest legislative body) (*ACFTU.cn*). Violations of workers rights should be pursued by the enterprise’s trade union and if necessary, disagreements or violations should be settled in court (*CCH,2003*). Compared to domestic conditions, the labour regulations, the ability to control actual conditions and implement laws, are relatively strong in the SEAs.

The PRC new labour law of 1994 was inspired by the previous development in the Shenzhen SEZ, where the more flexible employment form of labour contracts re-emerged and gradually replaced the old “cradle-to-grave” system, also known as the “iron rice-bowl” (Cheng et al 1998). The removal of the old employment guarantee and old hierarchical benefit structures also coincided with the retreat of the state as the, more or less, sole industrial employer. The contracts are based on a pilot model contract, so very little is actually open for bargaining and much is left at the mercy of the firm. The CLL (Article 33) states that trade unions *may* sign collective contracts, but does not force it (Cheng et al 2000). The labour contracts are formulated in general terms and are often difficult to use in settlement of

disputes. The new system has made an important statement, however, as it does not differ between workers or exclude certain groups. Thus, it also includes rural and migrant workers with (technically) the same labour rights as the urban workforce (Cheng et al 1998).

4.2 Trade Unions

The Trade Union Law of the PRC gives all workers the right to form or participate in a trade union. The activities of all such groups are co-ordinated by the All-China Federation of Trade Unions (ACFTU), which functions as an umbrella group. This constitutes a centralised, political and highly hierarchical trade union system, where reforms are carried out “top-down”. FIEs are by law required to support unions and to provide some financial support (smaller enterprises are bound by such laws to a lesser extent). (*ACFTU.cn*)

The main functions of the ACFTU are to serve the interests of the state, by promoting labour discipline, enhance labour productivity, conduct political and ideological indoctrination and improve the knowledge and skills of workers. As trade unions are strongly influenced by the CPC (Communist Party of China), serious conflicts between workers’ rights and national economic objectives are resolved at political level. Trade unions are required to “safeguard the overall interest of the people nation-wide” (p 247, *CCH,2003*), a principle which highlights the subordination of unions to economic projects. Unions have the right to active participation in occupational health and safety issues concerning their workers and issues concerning the special needs of female workers. The union should also be allowed to take part in production management and sign collective contracts on behalf of workers, participate in board meetings and take part in reports on the enterprise’s activity, especially with regard to areas affecting the rights and interests of employees. When employing new personnel, or dismissing employees, the trade union should be informed prior to action.

Primary trade union committees are required to be established in production units employing more than 25 workers (in Guangdong, this was changed to 10 workers in 2004). Foreign funded projects rely on unions to a higher extent and must include safety and health standards in their contracts. Government labour management departments oversee and reserve the right to carry out inspections of production. The trade union is responsible, in most instances, for the protection of workers and their rights and FIEs are required to appoint personnel for the purpose of such protection. (*CCH,2003*)

In many developed economies, the unions have managed to efficiently influence their members’ situation. In practise, the Chinese grass-root unions often have a role as observers or in supervising the implementation of legal and labour department directives (*CCH,2003*). It

is also common that the unions are strongly influenced by management (Cheng et al 2000). Collective bargaining through unions is permitted, whereas strikes are not. Unions are even bound by law to oppose acts which interrupt production. Strikes are, however, not categorically forbidden, as certain, rare circumstances (usually ignoring serious health risks or endangering of workers' lives) could allow for such actions under a short time (CCH,2003). Knowledge among workers of the union's functions, including collective bargaining, may be severely limited. Complaints are often referred to the work floor supervisors and the grass-root unions often consist of managerial, technical or supervising staff (Ngai, 2006).

The personal networks (*guanxi*) among workers, is based on kinship in the traditional Chinese society. Kinship among migrant workers may be regarded in a broader sense (known as *tongxian* identity) and may be based on ethnicity, actual kinship or regional origin. Many times, such social formations substitute the lacking or insufficient official institutions and give the workers some level of power over their situation. For recruitment, information about opportunities, and regulation of the relationship between workers in the workplace, *guanxi* is also an important factor. (Ngai 2005; Ngai, Hong Kong)

Due to the unions' integration into the central and province governments and central legal directives, unions differ little between the locations. Differing benefits of union presence are more likely to depend on other factors.

4.3 Labour Conflicts

The highest arbitration in wages, working conditions and implementation of legal directives is likely to be found in small and medium sized TVEs (township and village enterprises). These also absorb some of the excess supply of migrants seeking employment (sometimes informally) (Cheng et al 1998). SEAs are not exempted from national labour regulations and actually face stricter laws, but they may still benefit from the weaker implementation in the SEA-hosting cities' peripheral areas, thus circumventing costs associated with improving working conditions for some parts of production.

An increasing trend in the PRD has been disputes regarding distribution of payment, or social insurance (Cheng et al 2000). Despite legal minimum wage-levels, workers in the industrial towns (e.g. Extra-SEZ Shenzhen, Guangzhou periphery and parts of Dongguan) often receive less than this amount. A common method is to include over-time work to reach minimum wage levels, which means unpaid over-time. Payment may be irregular and in lump sums, not specifying rates (overtime work, or work on rest days) and basic wage. Often

deductions are made for dormitory rent, food, water, electricity or even social insurance and punishments may result in fines which are drawn from pay. The most common violation is against regulations for overtime, which may be substantial, especially during peak periods (Ngai, Hong Kong). Some companies with high turn-over systematically delay wages for one or two months to keep employees from quitting. Larger FIEs tend to have better labour-management relations. Many of the “sweat-shops” are often small firms, engaged in processing activities in industries that require small investments. By renting land and factory buildings, they also become extremely mobile. These firms focus on short-term gains and locate around the primary cores, which house the various SEAs. (Cheng et al, 2000)

Although the frequency of injury-related conflicts vary among industries, injuries can be used as a measurement to indicate poor, or even illegal, working conditions as much of the legislation on workers’ rights relates to safety issues. According to a report from Guangdong University of Business Studies, as much as 85.6 % of those suffering work-related injuries in the PRD were migrant workers and most injuries took place in private enterprises (53.9 %), with fewer cases in SOEs (3.5 %) and collective-owned enterprises (1.9 %). Divided into domestic and foreign ownership, domestic enterprises had the most cases (44 %), followed by enterprises with funding from Hong Kong and Taiwan (37%). Other foreign-funded enterprises had by far the lowest rate (1.7 %). The hardware industry represents 32.3 % of injuries, followed by the furniture-making industry at 13.1 %, electrical appliance industry at 8.1 % and construction industry at 5 %. Major causes of accidents were identified as lack of safety training, old and outdated machinery and too long working hours. Among the 582 interviewees, about 80 % were unaware of their rights in case of work-related injuries. (*News Guangdong*, September, 2005)

Mechanisms for setting labour disputes are generally underdeveloped. In FIEs, the enterprise’s trade union is the primary tool to address conflicts (this role is otherwise played by the worker’s council or “staff and worker representative”) (*CCH,2003*). Simplified, there are three steps in settling disputes: Mediation, arbitration and litigation. Mediation is promoted by Chinese law, a fact explained by the communist heritage, but also by the traditional Chinese view on law-suits as shameful. Thus, most disputes are settled administratively (without litigation). For this and other reasons, only a few disputes go to arbitration and become officially registered. SOEs and large companies much more often have in-house committees to handle disputes, whereas small and medium-sized firms rarely do. (Cheng et al 2000). The SEAs have brought the creation of new institutions to manage the work force more efficiently. The Labour Dispute Arbitration Committee and the Labour

Relations Supervisory Brigade are both components in the Shenzhen SEZ Labour Bureau and were installed as the first of their kind to deal with an increasing number of labour-related problems. Other cities, like Guangzhou, followed this example to strengthen control in the developed parts of the city (Cheng et al 2000).

In the view of the Chinese Government, industrial action has always been considered a threat to social stability and to economic development. As labour disputes are seen as an indicator of labour relations, measures have been taken to reduce such conflicts. Unfortunately, this view has also resulted in a system where local officials are reluctant to report serious cases. Other obstacles include workers' limited ability to organise independently of the state and workers' ignorance of their rights, or how to pursue them. (Cheng et al 2000)

The situation is complex and also representatives of authorities admit that it is very difficult to monitor laws, directives and codes in an environment where new factories are established all the time, production networks are continuously and rapidly reconfigured, and an unknown number of migrant workers constantly move and change employment (AP, Feb 05, 2005).

Local protectionism has also kept the local governments from wanting to "upset" investors, so violations of workers rights have been able to continue in reality (Cheng et al 2000). This problem appears to be smaller in the zones, as they are better organised, aim to attract developed industry and have additional resources to deal with disputes. However, the most efficient way to achieve change is still through actions such as strikes or protests, which draw national or international attention. Directives coming from "above" are also more likely to result in actual changes and can circumvent local interests to a further extent. (Ngai, Hong Kong 2006)

All the firms interviewed handle conflicts within the company. None of the FIEs stated experience of any serious conflicts. In the domestic firms, workers were to choose representatives in case of conflicts. This way, management and workers could negotiate and in some cases, the union would also participate. Usually, conflicts were solved through a compromise, with the least costly demands being met. In other cases, only the representatives were given some kind of deal to stop protesting. One domestic firm manager said that they could not fire workers for protesting, but kept record of "trouble makers" and would fire them at the first chance, when these made some kind of work-related mistake (Pang, Guangzhou).

According to one FIE, subcontracting parts of production and packaging to domestic firms, it lies in its own interest to control the situation in those factories and plants carrying

out the contracted activity. If the working situation is bad and safety in production is ignored, then there is also no way to guarantee efficiency and continuity in production and the just-in-time delivery chain may be broken due to accidents, destroyed machinery or labour conflicts (G.S. Guangzhou).

Improved conditions and increasing labour costs can also have adverse effects, as firms may try to shift costs of social fees over to workers and child labour becomes increasingly attractive and schoolchildren are sometimes organised during longer holidays to work in factories in the industrial areas (Ngai, Hong Kong 2006). A Chinese subcontracting coordinator pointed out that child labour still occurs, but that firms employ mainly those over 14 years of age, as fines are lower (legal age is 16). He also mentioned Dongguan firms as being more likely to have such workers than firms in the other two cities. Severe illegal labour practices are otherwise most associated with TVEs, not the urban areas (Wang, Guangzhou). Such effects are likely due to improved control of economic activity in SEAs, in combination with a high level of integration with the host economy. That Dongguan is more often associated with lower wages and worse working conditions, despite having the highest dependency on foreign capital, seems strange, considering the better wages and conditions generally applying in FIEs. Apart from obvious reasons, tied to industrial composition, this might be explained by the fact that FDI mainly comes from Hong Kong, Macao and Taiwan and part of these investments are likely those abandoning Shenzhen during industrial transformation and development. The other reason is that a small share of the work force is employed directly by FIEs. Their importance in value creation is likely to reflect a system where low value-added activity is sub-contracted. In a situation such as this, the positive effects of FDI on working conditions will be weaker. In Guangzhou and especially Shenzhen, direct employment by FIEs is more extensive (Guangdong SYB, 2005). The role of urban-collective and TVE-employment is pronounced in Dongguan, whereas it fills a marginal function in Shenzhen (somewhat more important in the extra-SEZ districts). The same category in Guangzhou, although not as prominent as in Dongguan, still holds an important position as employer. The reason, however, is the large resident population and the retreat of the SOEs, leaving an already active industrial workforce to be absorbed by new local firms.

4.4 Employment composition

Sectors particularly important as employers do not clearly follow the composition of production value. This has mainly two explanations. The first is that different sectors naturally use labour with different intensity in relation to produced value and that the great majority of

migrant workers do not show up in the official employment statistics (i.e. city statistical yearbooks).

Similarly to Guangzhou's dependency on several industries for its production, the city also depends on a larger number of different industries for employment, absorbing similarly large shares of the workforce. In 2004, the main employer is still manufacturing of *garments, shoes and hats*, followed by *leather, furs, down and related products, telecommunication, computer and other electronic equipment and electric machinery*. The industry contributing the most to GOV, *transport equipment*, employed only about 6 % of the registered workforce. FIEs and foreign funded projects dominate employment with only a small share remaining in SOE employment. In Shenzhen, the dominating contributor to industrial output value is also the main employer. *Telecommunication, computer and other electronic equipment* employs more than one third of the registered workforce. *Electric machinery, plastic products and instruments and meters* also absorb large shares. Also in Shenzhen, some of the traditional sectors contribute noticeably to employment, including *garments, shoes and hats* and *leather, furs, down and related products*. Dongguan has a composition of industrial employment similar to that of Shenzhen, with *telecommunication, computer and other electronic equipment* dominating, followed by *electric machinery* and *instruments and meters* as the second and third most important employers. *Garments, shoes and hats* still contribute significantly, although its importance as employer has continuously decreased since the early 90s. Simultaneously, *telecommunication, computer and other electronic products* increased its share of the workforce rapidly.

The overall concentration of the workforce to a few industries, according to the Herfindahl index, shows a medium to low concentration in Guangzhou and medium to high concentration in Shenzhen and Dongguan. That Shenzhen and Dongguan have the same concentration of workers to sectors, whereas Shenzhen has a much higher concentration of GOV to sectors, further strengthens the a pattern of more advanced (less labour-intensive) production in Shenzhen, compared to Dongguan, as their industrial composition is similar. The fact that some of the early industries remain important employers shows that the increased economic importance of more advanced sectors does not affect the work force composition immediately, or to a corresponding extent. This is of importance, as it may weaken or delay the effects of industrial upgrading on working conditions for a large majority of workers.

4.4 Employment Composition, by Sectors

Composition of employment by main industrial sectors (%) (Enterprises over levels)				
Sector	City	Guangzhou	Shenzhen	Dongguan
	Year	2003	2004	2003
Food manufacturing		2.35	0.7	0.34
Textile industry		4.37	1.75	2.62
Garments, shoes and hats		12.38	5.1	5.17
Leather furs, down, related products		11.07	4.17	0.38
Furniture manufacturing		0.97	2.49	4.47
Papermaking and paper products		1.81	1.01	1.49
Printing and record medium production		1.6	2.64	1.36
Cultural, educational and sports goods		6.13	4.74	1.36
Raw chemical materials, chemical products		4.25	0.8	0.84
Medical and pharmaceutical products		1.78	0.71	1.79
Plastic products		4.97	6.18	2.36
Non-metal mineral products		3.43	1.01	5.69
Metal products		3.46	4.39	1.03
Ordinary machinery		2.25	0.86	0.64
Special purpose equipment		1.52	1.86	
Transport equipment		5.9	2.52	0.65
Electric machinery and equipment		6.63	12.75	19.28
Telecommunication, computer and other Electronic equipment		8.39	35.08	27.58
Instruments, meters, cultural and office machinery		3.78	5.57	12.95
Handcraft article and other manufacturing		3.81	3.02	
Other industries		12.96	1.86	6.98
Calculated Herfindahl Index		0.10	0.17	0.17

Source: Dongguan 2004 Statistical Yearbook, Guangdong 2005 Statistical Yearbook, Guangzhou 2004 Statistical Yearbook, Shenzhen 2005 Statistical Yearbook

4.5 Migrant workers

To enable movement of labour, the household registration system (*Hukou Jidu*) was made more flexible, enabling those offered urban employment to apply for a temporary permit to live and work in the city. Family members of workers are not covered by this temporary permit. Migrant workers' original hukou remains, and after expiration of temporary permits, workers are not permitted to stay in the cities, nor are they eligible to be citizens and are not entitled to the same social benefits as local residents. Thus, workforce reproduction costs are left to the rural areas. Those born with, or granted, a permanent hukou in the location are considered citizens (e.g. Guangzhou hukou). The *hukou* system still ties workers to the village or town of birth, where they depend on family and are subject to the ruling socio-economic structures of that region. Initially, all applications for temporary permits were to be handled directly by appointed local official bureaus, but the rapid development soon made such

institutions insufficient and authorities lost control of the massive migrant flows to the PRD cities. (Ngai, 2005, Ngai, 2006)

The migrant workers, known as *wai-lai-gong* (migrant workers), *min-gong* (peasant workers) or *dagong mei* (working sisters) are typically young women from rural and inland provinces, such as *Sichuan, Hunan, Guangxi* or *Shandong* (Ngai, Smith, Holloway, 2005). Female workers are cheaper, easier to control and easier to house together in dormitories. The supply of rural women may also be influenced by tradition and socio-economic factors. Despite rapid industrial development and up-grading, the workforce has remained predominately female, in contrast to common assumptions regarding SEA development. The migrant worker will typically spend 3-5 years working as a wage labourer in an industrial city. This is especially true for women, who then return home to marry. From a social standpoint, the migrant workers are often placed far down on the social ladder. The migrants use their family and community networks when looking for employment with the primary aim being to earn money, but another aspect of the migration is that it is the chance for young people to get out of their villages between childhood and marriage. (Ngai, 2005; Ngai, Hong Kong)

All three cities rely on migrant labour of various skill-levels. In 2004, Guangzhou received 219 807 immigrants (not guest workers), Shenzhen received 129 051 immigrants and Dongguan received 29 261 immigrants. These are most likely not of the same character as the massive flows of migrant workers from rural and inland China, consisting primarily of unskilled labour. Of the three cities, Guangzhou was the only one to receive a majority of immigrants with Guangdong residency. The actual number of migrant workers in the various locations is difficult to determine. Official statistics from various local authorities place the total number of migrant workers in Guangzhou at almost 3,5 million (Xinhuanet, Aug. 21, 2005), almost 6 million in Shenzhen (Xinhua News Agency February 27, 2006) and just over 5,5 million in Dongguan (Wikipedia “*Dongguan*”; Guangdong SYB 2005). Although large, these numbers are likely still too low, especially for the estimates in areas surrounding the core cities (Lin, Hong Kong). Although all of the three cities focus on making themselves competitive through industrial development and the ability to host high-tech, skill-and technology-intensive production, the continued supply of migrant workers enables them to also sustain low-skill, low value added industries.

Early set-up production in the region used a homogenous workforce, which represents a typical transformation of the local labour reserve when establishing SEAs. The workers were generally of local origin and the structure of (especially township and village) enterprises

reflected hierarchical and kinship patterns in the village or town where production was located. As the industrial centres grew, even small companies started hiring migrants in production. Due to the strong reliance on migrant labour in production, most workers fit the early SEA work force structure, but this is changing, due to the needs created by industrial development.

The flow of labour to the developing centers of the mid-and early 90s was restrictive, informal and often illegal. This is a picture that persists and makes control difficult (Lee, 1997). Recruitment and selection of new employees is supervised by the local labour bureau and preference is to be given to those with residence status in the municipality, whereas outside workers should be recruited first after the local pool has been explored and exhausted. This improves control of migration, but is also a way to compensate for the downsizing of SOE employment in the cities (Cheng et al 1998).

The labour system creates low cost labour, with the access to vast labour reserves institutionalised between state and market, without resulting in a build-up of labour institutions. In Guangdong (and other parts of China) trade unions, geographically rooted norms, and localised practises have not led to increased wages and improved conditions, like in many developed economies. The ready supply of cheap migrant labour decreases the risks and need for employers to make changes, due to pressure from employees. The excess supply has also created competition among workers and their only advantage in many cases is price. Due to constant circulation and isolation of workers in factories and dorms, through temporary housing in facilities owned by the firm, it is difficult to organise workers and there is no corresponding formation of a resident working class. (Ngai, Smith, Holloway, 2005)

The hukou, dormitory system and lack of independent unions are very important features of the labour market, as workers influence and ability to affect their own situation has long been minimal, leaving decisions to firms and authorities. The system not only weakens workers power by the transient nature of the work force, but also increases risks of investing in migrant workers' training and development. The high turnover and low investments in the workforce are typically associated with the early stages of SEA establishment, but persist in this case, despite advanced industrial development in other aspects. The use of dormitories has been known to limit the freedom and abilities of workers further, but is at the same time the only realistic alternative to housing migrant workers in many cases. Almost all manufacturing FIEs use dormitories for short-term housing of employees (Ngai, 2006) as availability of cheap housing in the proximity of the industrial districts, other than the dormitories, is difficult to come by and the government leave it up to the firms themselves to

solve this (Kelly, Foshan). Local residents, also those low-skilled, remain longer with the firms. They are rooted in society at the location, are given better opportunities in employment, enjoy benefits associated with local hukou and are more often trained in the firms (Ngai, Hong Kong; Pang, Guangzhou).

The trend to build dormitories, rather than renting them from the local government, means that living standards are less dependant on local standards and more on the firm's policy. The integration of working space and living space, by housing workers in direct proximity to the factory, enhances employer control and the ability to maximise employment of the present labour force. By housing workers very close to the factory, it becomes easier to implement an on-time delivery strategy.

As the cost of living has risen rapidly in the coastal areas of Guangdong (PRD) and other parts of China are undergoing rapid industrial growth, the pressure for higher wages has increased, also for the floating population of migrant workers. At the same time as this has caused some industries to move towards inland locations with lower wages and less strict legal implementations, it has also created incentives to improve conditions for workers in the coastal regions. This is affected by the higher mobility of the labour force, competition from other locations and the increased attention attracted through demonstrations, strikes and publications. (Ngai, Hong Kong)

For some industries, costs have increased rapidly due to stricter environmental laws and labour regulations. At the same time competition in product markets keeps prices down. In Guangzhou, the government also puts less focus on the traditional industries and it has become difficult to receive good terms for production, whereas the early domestic exporters and entrepreneurs could qualify for benefits and preferential loans for investments. In the case of the textile industry, reliance on machines has increased, with fewer workers doing the same job as before. Wages are higher, there is social security and pension, but migrant workers still have to work hard. "Workers are still workers". (Pang, Guangzhou)

Also legal protection is improving, often originating in the urban centres. Many of these new regulations are mainly paper laws, but they successively contribute to improved conditions and steps are taken as these laws and the workers rights are tried in legal courts. (Ngai, Hong Kong)

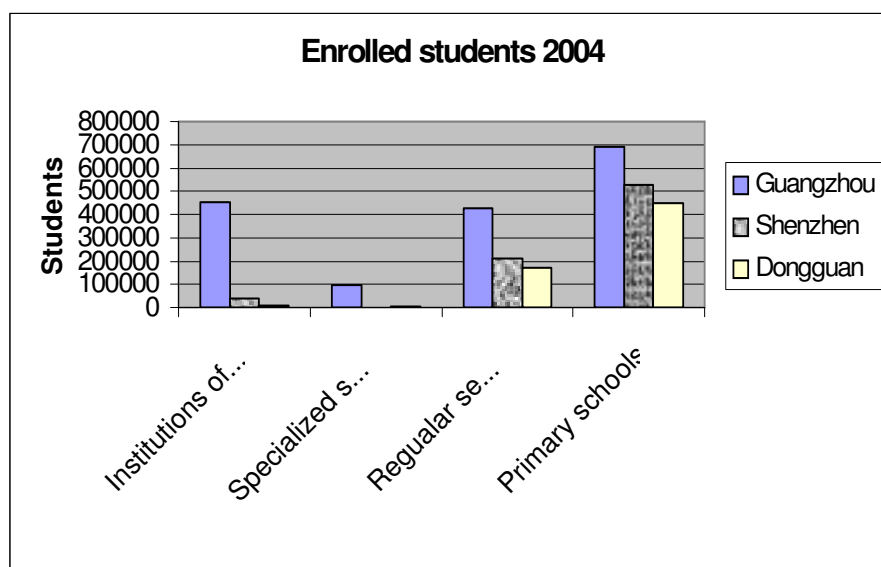
4.6 Adaptation to the need for Skilled Workers

Industrial development is associated with greater need for skilled labour, but despite focus on modern industries in all three cities, there are still great differences in their capacity to supply

very high-skilled and specialised labour. Firms in all locations mentioned difficulties in finding skilled labour. Quite frequently, the firm must develop the labour resource within the company.

In supply of skilled labour, education and research facilities, Guangzhou has a strongly dominating position, also leading in education facilities, hosting roughly 40 schools of higher learning, including the Zhongshan and Jinan universities, and additional research institutions. However, the skilled labour in Guangzhou is not tied to the location in the same way as the rural labour force. Shenzhen and Dongguan have undertaken efforts to increase investment in education as well as R&D facilities, but are still far behind in comparison. Especially Dongguan depends on attracting skilled workers from other locations (News Guangdong 2003-09-17), through a national and international university network system. This also indicates that the high dependency on foreign capital has not brought the research and development steps of production, alternatively that these are efficiently kept within the individual enterprises. The stronger focus on education and research institutions in Guangzhou does not reflect the relationship of intensity in medium and highly specialised or technical personnel working in the cities. The distribution of skilled labour, across industrial sectors, is relatively well described by official statistics (see table 4.1 *Employment Composition by Sector*), as it more often consists of citizens (Ngai, Hong Kong, 2006).

4.6 Enrolled students by city and level, 2004



Source: Guangdong SYB, 2005

4.6.1 R&D facilities by city

R&D institutions 2004	Institutions (Units)	Employed (person)	Expenditure (Y10000)
Guangzhou	113	10912	305069
Shenzhen	6	142	2511
Dongguan	4	256	3164

Source: Guangdong SYB, 2005

The patterns of social protection also reflect the need for a specialised workforce. If workers are no longer the “renewable resource” described in the early stages of ILO development paths, then urban locations can no longer rely solely on rural labour reproduction.

Measures of increased social protection for workers, particularly migrants, have emerged mainly in Shenzhen, where some larger projects are constructed to improve social insurance coverage and improve the human capital base among a large share of the migrants (Gov.cn, April 3. 2006; Chinagate.com, September 4. 2006). A reform in Guangzhou will eventually make it possible for migrants, who have worked in the city for a long period of time, to gain citizenship. This reform could strongly improve the migrants’ weak position, but will only cover a small share of the typical migrants. Such reforms signal the increasing specificity of also migrant labour, with the primary benefit of increasing and retaining skill in the location. Due to Guangzhou’s relatively high dependency on local labour, the situation is different, as this is typically the skilled labour pool. Dongguan focuses to a lesser extent on such social measures and takes more sporadic action, showing weaker adaptation to new labour supply patterns. This is most likely due to a relatively high dependency on low-skilled labour, which is easier to replace. This relationship is partially mirrored by participation in various forms of social insurance (Dongguan, Guangzhou, Shenzhen SYB, 2004; Guangdong SYB, 2005), where Shenzhen has the highest coverage, followed by Guangzhou and last Dongguan. Guangzhou leads in unemployment insurance and child bearing insurance, which most likely reflects the city’s different labour force composition. All three cities have had improved social protection coverage during the last few years.

4.7 Wage

Highlighting the weak bargaining position of migrants, a report released by GDFTU (Guangdong Federation of Trade Unions) shows that the average wage of 11.6 million “*mingong*” was only 55% of the average for state and collective staff and workers (not only including the higher paying industrial sectors). 63.2 % of the migrant workers earned between

501-1000 RMB/month (this often includes over-time). Wage development in Guangdong has been remarkably slow and, over a period of twelve years, the minimum wage increased by only 68 RMB (Ngai, 2006). Still, the minimum wages set in SEAs, the Shenzhen SEZ being the prime example, are noticeably higher than the rest of the province and, the minimum wages have risen at a relatively higher pace in recent years.

4.7 Minimum Wage

Minimum wages RMB/month based on 40 hours work per week				
Year	Guangzhou ⁸	Shenzhen SEZ	Shenzhen	Dongguan
2000-2001		574	419	
2001-2002		574	440	
2002-2003		595	460	
2003-2004	450	600	465	450
2004-2005	510	610	480	450
2005-2006	684 / 574	690	580	
2006	780/	810	700	690

Source: *China Labor Watch, 2003*; *China Daily*, Dec. 24; Ngai, 2005; Lemon IDG, July 13, 2006

4.7.1 Average Wage by City and Ownership, 2004

Average Wage RMB/year	Total	SOEs	Collective-owned Urban	Other ⁹
Guangzhou				
(Urban district)	32618	43918	17214	24880
(Conghua)	16490	22163	8716	11823
(Zengchen)	19470	25382	12258	15854
Shenzhen	31928	45212	20256	27868
Dongguan	25326	35163	13954	19223

Source: Guangdong Statistical Yearbook 2005

The average wage (primarily calculated for non-migrants) is higher in Shenzhen, followed by Guangzhou. This is likely a reflection of the mix of industries in Guangzhou, as the city also hosts high skill, high-value added sectors alongside the more traditional sectors. It is also clear that firms in the peripheral areas of Guangzhou pay much lower average wages than those in the centre. Firms in Dongguan pay the lowest average wages and likely have the

⁸ Like Shenzhen, Guangzhou has started to apply two different minimum wage levels. One for SEAs and specialised industrial parks and one for the less developed districts.

⁹ This category includes private and foreign enterprises

smallest difference in average wage paid by domestic and foreign firms, despite an industrial structure that resembles that of Shenzhen. This is a further indication that the industries in Dongguan depend on low- or medium –skilled workers to a higher extent. Wage competition has affected some industries and caused some segments to leave the large centres, but this has not led to de-industrialization of early FDI recipients, as is often argued in SEA criticism.

Wages are often seen as an indication of working conditions and low wages are a way to attract investment, when there is little else to offer. Guangzhou’s guide to investors (Invest Guangzhou) specifically offers advantages in low wage costs, mentioning labour costs of 12-20 RMB per hour and person (based on a 40 hour week). The Dongguan investment bureau goes further, stating that Dongguan offers “abundant skilled workers and eligible executives and engineers” and the city also markets itself as a location with low labour costs, explicitly stating that “labour costs in Dongguan are very competitive if compared with Shenzhen, Guangzhou...”(Invest Dongguan). This reveals the mixed nature of the production centres, as the main focus is placed on technologically advanced industries, but the access to cheap and also low-skill- labour remains important. This is, however, not only a reflection of the development of these particular locations, but also of the over-all transition in which the host country finds itself. The vast labour reserve together with the ambitions of technological development and skill-enhancement maintains different mixes of industries and working conditions in all locations.

4.8 Recruiting, Training and Retaining Workers

None of the firms interviewed, Chinese or foreign, had experienced problems in recruiting unskilled labour. Still, other regions are developing and the need for higher skilled workers has raised motivation to attract and retain workers through various incentives. All the foreign firms mentioned difficulties in swiftly finding skilled workers, especially multi-skilled workers (e.g. simultaneous technical skills and proficiency in the English language). A researcher commented on the alleged shortage of factory workers in coastal areas, as a symptom of rising costs of living, but insufficient increase in minimum wages (Ngai, Hong Kong). The domestic manufacturing firms employed, almost exclusively, unskilled labour. Some are chosen for training, which may continue over a long period of time. These have to sign contracts to remain with the company (Pang, Guangzhou; Li, Dongguan).

Despite reports of labour shortages, the demand for low-skilled workers is usually met without difficulties in the FIEs. Usually, the need for workers is simply posted outside the factory. For employment of skilled labour, the FIEs use agencies or the own built-up network.

The domestic firms use their networks, the networks of the employees or post vacancies. A domestic factory manager compared the situation in Guangzhou with that of firms situated in smaller, inland locations, saying that recruitment was easier in the big centres. In other plants, where she had worked, recruitment was done actively, out in the villages, but in Guangzhou, the migrant workers come by themselves (Pang, Guangzhou).

The foreign firms have introduced elements of their domestic working culture into the activity in Chinese locations, but have mainly adapted to Chinese style management and working culture. Especially the hierarchical structure is difficult to break (Blücher, Guangzhou; Kelly, Foshan) which makes it difficult to introduce some elements of western-style labour empowerment and participation, described in the ILO steps of development. FIEs rely more heavily on educating their employees, due to differences in language and working culture (this does not primarily include the lowest skilled workers). All the foreign enterprises interviewed, had standardised training programs, with some steps involving all employees. Such investments make it more important to keep employment turnover low, as it becomes costly and time consuming to replace workers. The training also makes them more attractive to other employers. Methods to retain workers vary from building “team-feeling” and loyalty by recognition of the employees, to simply paying higher wages (Grufman, Shenzhen) and to base annual wage increases on performance (Blücher, Guangzhou). Others rely on continuing development of the employees and the working environment, rather than paying the highest wages, as a way to sustain motivation (Kelly, Foshan). One firm even let an independent third party do surveys on satisfaction with conditions in the factory, and based part of management’s bonuses on these. There are a number of “show case” factories like this in the zones, but they represent a very small percentage (Ngai Hong Kong; Kelly, Foshan). Such non-cash incentives are associated with developed economies and sectors, where personal development and recognition becomes an important complement to wage. It may, however, also reflect “western values” in a firm, which reduces the correlation with industrial development on the location.

Some of the labour-intensive industries require some extent of professional training. This applies to industries in electronics manufacturing and related production and has resulted in lower turn-over of employees and better working conditions within those industries (Ngai, Hong Kong).

The training given to shop-floor workers is usually not very extensive. It includes safety training, company policy and “on-the-job” training (Grufman, Shenzhen). This was similar in

some of the domestic firms (Pang, Guangzhou). The major difference found was the extensive training given to skilled and medium-skilled employees in foreign firms.

Bonus systems are common practice in foreign as well as domestic enterprises, primarily for “floor-workers” with good attendance, productivity and duration of employment (Grufman, Shenzhen; Pang, Guangzhou; Li, Dongguan). “Good behaviour” is overall rewarded with bonuses, wage raises and gifts or “special honours”. None of the FIEs mentioned punishment, although they would fire employees not responding to warnings of misbehaviour (Blücher, Guangzhou). In the domestic firms, a reduced wage was used if employees did not fulfil their duties (Pang Guangzhou; Li Dongguan)

The pattern is similar within the FIEs participating, with low turnover among skilled workers and higher turnover among the unskilled workers. Firms rated turnover in the latter group low to medium high, with a peak around the Chinese New Year (Spring Festival). The highest turnover was found in one of the Chinese firms, where more than half the workforce had been replaced within the last year (Li, Dongguan). Another Chinese company had a very low turnover of employees (below 10 %) despite the fact that production was labour intensive and relied on migrant labour. The manager explained this with good labour relations, recognition of achievements and the fact that the type of factory (textile colouring) was becoming rare in the region. She pointed out that workers, who change employment, usually remain within a similar type of production and that factories in textile districts, in the earlier years, would exchange workers much more frequently than today (Pang, Guangzhou).

Use of non-cash incentives is thought to occur in later stages of development, where worker-management relations have evolved beyond the managing of a production factor. Monetary compensation is, however, still the primary incentive, given in FIEs and domestic firms alike, thus indicating a range of labour relation and management styles within and between industries. The methods to retain workers do not seem to differ greatly between the domestic and foreign owned enterprises. They are much more likely to depend on the skill-level and origin of those employed. Although the use of illegal methods is widely reported, it is unlikely to be the norm in enterprises run directly by foreign investors, as they operate in a better controlled environment. In cases relating FDI to various forms of labour abuse and disregard for workers’ rights, it is frequently a situation of subcontracting or other co-operation, not under direct control of the foreign firm, but it may still be under the responsibility of that firm. The simple picture of either sweatshops or developed labour relations with modern production methods in zones is not found in any of the locations. Labour management is very diverse within SEAs and sometimes, even within firms. Also the

development steps, suggested by the ILO project on EPZ, fail to portray the situation, as elements of all stages coexist simultaneously. The main reason is likely that scarcity of labour mainly applies to certain segments of industry and that the high integration with the domestic economy permits use, directly or indirectly, of different production methods for different segments of industrial sectors.

4.9 Corporate Codes of Conduct

Working conditions in Chinese manufacturing and processing plants have been criticised and investigated by international media and in academic studies world wide, resulting in an international “anti-sweatshop” movement. Especially child labour, low wages, frequent injuries and factory fires have stirred the world opinion and spurred the use of Corporate Codes of Conduct. These codes are a formal statement describing the ethical standards of a company and apply to the factories of its suppliers and to its trade partners. Such codes commonly include adequate wage and working hours, overtime regulations, occupational safety and policy against forced labour. The codes represent a factor driving development in labour management that is not strictly tied to industrial advancement.

Due to the limited presence of government in many factories, in respect to labour protection and labour-management relations, the importance of company codes and transparency becomes central. Critics argue that codes are just PR and that companies have little interest in publish the violations taking place among their suppliers. Still, the demand for improvement comes from the FIEs/TNCs (Trans-national Corporations), not from their suppliers. Such demands become yet another requirement for suppliers to meet, in response to changing market demands, but may also create incentives for Chinese producers aiming for western markets and, despite the flaws in implementation, companies with codes tend to do more than those completely lacking such programs (Ngai, July, 2005). Many subcontractors view the codes as an additional burden, but due to competition for production-orders, they have little bargaining power and sign contracts which they will not be able to follow. A factory owner in Dongguan complained that the demands of such codes were set too high and that the foreign companies must understand this themselves, as they keep demanding more, but prices for the goods from Chinese producers do not rise correspondingly (Li, Dongguan). Similar views were found in the management of other manufacturing firms in Shenzhen’s peripheral areas (Ngai, July, 2005). In environments characterised by seasonality, fluctuations in order load and just-in-time production systems, clashes between codes of conduct, deadlines and budgets, are highly likely to occur. When they do, many small, local producers

admit that business comes first, workers' interests second (Ngai, July 2005). This would seem natural, as the implementation of codes is a business strategy to reach markets in the US and in Europe, not a goal in itself. An additional problem is that, especially for just in time delivery and fluctuations in demand, smaller suppliers rely on informal supporting networks, where they share orders with other firms in the network. This makes their use of resources more efficient, but makes it close to impossible for the contacting firm to control the working situation.

There are of course FIEs going to great lengths to ensure that their partners and subcontractors actually represent the company's values and codes. One factory manager explained that the company had invested large resources in training and education, not only of their own staff and workers, but also of those with whom they were in direct contact through contracted work (Kelly, Foshan). This had the effect that the company had very few local partners, as it was difficult to guarantee the quality of other firms. In addition, the nature of production required high standards to ensure the safety of the final products, thus creating direct incentives to control certain production aspects carefully.

5.0 Conclusions

Like most SEA hosting cities, Guangzhou, Shenzhen and Dongguan began with very labour intensive industries for export production during the initial phases of SEA establishment. The export industry primarily consisted of low value-added, simple manufacturing and processing, within industries such as textiles, garments and electronics. At this stage, the region did indeed become known for sub-standard working conditions, with workers exposed to an industrial environment with high rates of injuries, low wages, and little real protection.

When the opportunity to compete for investment was expanded beyond the original SEZs, a situation of fierce local competition arose, creating inefficiency and potential for race-to-the-bottom like scenarios. For economic reasons and not, primarily, to deal with the mounting humanitarian or environmental problems, early measures were taken to gain control of the situation. Through co-ordination by strengthened provincial government authority, national guidelines for investment and further unified legislation in SEAs, which also brought SEAs' and hosts' legal environments closer together and removed scope for the use of lax labour legislation, the potential for harmful competition decreased. Focus could be set to international competition .

Some FDI competition obviously remains between the locations. Dongguan specifically offers investors cheaper labour than the other two cities, but minimum wage levels are converging and the three cities have rather come to be part of the same, non-homogenous, core, rather than engaging in a core-periphery pattern with each other. Labour costs do not seem to be the primary attraction for foreign investment That local authorities in Guangzhou and Shenzhen have set higher wages, reflects the industrial development and living costs in the locations, as wages on all levels are higher. Wage disparities seem to have affected some industries, but not the ability to continue attracting FDI to all locations which have all come to focus on technology-intensive development strategies. Less developed industry from the early centres has “spilled over” into the domestic economy, eventually followed by “herding” investments from Hong Kong, Macao and Taiwan. “Home grown” Dongguan has mainly copied the development of neighbouring Shenzhen, and has at times dominated industries which were central to the other cities at earlier stages.

All cities have grown some industrial mix, including developed industries with some upgrading of production methods within established industries, allowing for higher wages in traditional industries as well. This process has slowly taken place over a long period of time, but has recently started to show among the exporting industries. Shenzhen, as part of the first export-led industrialisation wave, and Guangzhou, as the province capital, have kept their

head start by realising the need for continued industry –and skill upgrading, in combination with supporting reforms, to remain competitive. Also Dongguan makes such efforts of upgrading, although the city is still lagging behind the other two in many fields.

The higher specialisation of labour in advanced industries is strongly correlated with improving working conditions, as workers become difficult and expensive to replace. But the effects on working conditions are slow, as the highly developed industries and the industries with very high value-added employ a small share of the work-force and traditional industries remain important for export and employment, although not specifically encouraged. In some cases, management styles simply reflect the ownership of the enterprise, but the co-existence of different industries has created a situation where working conditions can vary extensively between firms. All locations display firms adopting developed labour standards in production, alongside other firms using lower standards, or even illegal practises. The ILO stages of development fail to capture actual development, as labour relations remain highly diversified inside zones, displaying elements from all stages simultaneously. Two potential paths of development, “sweating” or development of the workforce, are suggested by the ILO for SEA firms facing increasing cost pressure. The former case is more likely to be found in peripheral areas of the cities and in the townships, not in the specialised SEAs, with their higher wages and stricter control of activity. The high level of integration with the host economy does, however, allow for production outside of the SEAs and the region’s economy is still very dependent on export manufacturing. The relatively low share of the workforce absorbed by FIEs hints that part of production is outsourced to local firms, via a system of complex distributions channels. This production is very difficult to monitor, for officials as well as for those FIEs trying to maintain their corporate codes of conduct. The sub-contracting system fuels spill-overs and integration of the SEAs into the host economy and supplies the SEAs with cheap labour, allowing them further specialisation towards relatively skill and capital intensive industries. However, it also reduces some of the pressure for improvements of production methods and standards.

The huge flow of migrant labour to the SEAs has benefited industrialisation by allowing rapid expansion, without imposing the social costs of labour reproduction on the host cities, as mainly temporary working residency has been granted for migrants. This has created a situation, where migrants not only have a weak bargaining position and could be easily substituted, but where investment in workforce development becomes less profitable and volatile. Workers’ limited ability to organise, the subordination of unions to economic growth and the still limited knowledge of workers’ rights contribute to weaken their situation. The

situation has just recently started to change, as particularly Shenzhen and Guangzhou focus on training and detaining of developed skills, also among migrants, in order to cope with changing demands for labour and in light of a potential labour shortage. Some of the improvements in labour standards have been adopted at province level, but conditions in the three cities still depend mainly on the industrial needs of the location.

Sources

- CCH Asia Pte limited “*Investment in Greater China- Opportunities and Challenges for Investors*”, CCH Asia Pte limited, 2003, Singapore
- Cheng, Joseph Y. S. et al “*The Guangdong Development Model and Its Challenges*”, City University of Hong Kong Press, Hong Kong, 1998. Chapters 1,2,4-11,13,14
- Cheng, Joseph Y. S. et al “*Guangdong in the Twenty-first Century: Stagnation or Second Take-off ?*”, City University of Hong Kong Press, Hong Kong, 2000. Chapters 1-11,16
- Cheng, Wei-Qi “*Investing in China Legal Perspectives*” LexisNexisTM, Butterworths, Hong Kong, 2003. pp. 83-85, 234, 314-16, 326-29, 342-43
- China Statistics Press “*Dongguan Statistical Yearbook*” (Chinese version, “*Dongguan Tongji Nianjian*”), Beijing 2004
- China Statistics Press “*Dongguan Statistical Yearbook*” (Chinese version, “*Dongguan Tongji Nianjian*”), Beijing 2003
- China Statistics Press “*Guangdong Statistical Yearbook*”, Beijing 2005
- China Statistics Press “*Guangdong Statistical Yearbook*”, Beijing 2003
- China Statistics Press “*Guangdong Statistical Yearbook*”, Beijing 2002
- China Statistics Press “*Guangzhou Statistical Yearbook*”, Beijing 2004
- China Statistics Press “*Guangzhou Statistical Yearbook*” (Chinese version, “*Guangzhou Tongji Nianjian*”), Beijing 2003
- China Statistics Press “*Shenzhen Statistical Yearbook*”, Beijing 2005
- China Statistics Press “*Shenzhen Statistical Yearbook*”, Beijing 2004
- China Statistics Press “*Shenzhen Statistical Yearbook*” (Chinese version, “*Shenzhen Tongji Nianjian*”), Beijing 2003
- Cling, Jean-Pierre and Letilly, Gaëlle “*Export Processing Zones: A threatened instrument for global economy insertion?*” Dial, 2001
- Gianmarco I. P. Ottaviano and D. Puga “*Agglomeration in the global economy: A survey of the “new economic geography”*”, CEPR and CEP, discussion paper 1997
- Hong Kong Trade Development Council, Research Department, “*Market Profiles on Special Economic Zones and Major Cities in China*”, 1994
- Hong Kong Trade Development Council (By Guangdong Research Institute of Foreign Economic and Trade Relations), “*Guide to doing business in China*”, Hong Kong 2004

- Lewis, Donald J. *“China Investment Manual” 2nd edition, volume 2, Asia law and practise publishing Ltd. Hong Kong, 1998*
- ILO, Working Party on the Social Dimension of Globalization (WP/SDG) *“Investment in the global economy and decent work”* Geneva, March 2002
- ILO, Committee on Employment and Social Policy (ESP), *“Employment and social policy in respect of export processing zones (EPZs)”*, Geneva, March, 2003
- International Confederation of Free Trade Unions (ICFTU) *“Export Processing Zones – Symbols of Exploitation and a Development Dead-End”* September, 2003
- International Confederation of Free Trade Unions (ICFTU) *“Behind the brand names – Working conditions and labour rights in export processing zones”* December, 2004
- Johansson, Helena *“International Competition, Productivity and Regional Spillovers”*; 387-401, *Lund Economic Studies, Lund, 2002*
- Krugman, Paul *“Urban Concentration: The Role of Increasing Returns and Transport Costs”*, World Bank Publications, March, 1995
- Kusago T. and Tzannatos, Z. *“Export Processing Zones: A Review in Need of Update”*, World Bank Publications, 1998
- MacPherson, Stewart and Cheng, Joseph *“Economic and Social Development in South China”*, University of Hong Kong, Hong Kong, 1996. Chapter 7, appendix 7b
- Ngai, Pun *“Global Production, Company Codes of Conduct, and Labour Conditions in China: A Case Study of Two Factories”*, The China Journal, No. 54, July 2005
- Ngai, Pun *“MADE IN CHINA, Women Factory Workers In A Global Workplace”*, Hong Kong University Press, Hong Kong, 2005. Chapters 1-4,7
- Ngai, Pun and Smith, Chris *“Putting Transnational Labour Process in its Place; Dormitory Labour REGime in Post-Socialist China”* 2005
- Sargent, J. and Matthews, L. *“What Happens when Relative Costs Increase in Export Processing Zones? Technology, Regional Production Networks and Mexico’s Maquiladoras”* Working Paper, University of Texas-Pan American, 2004
- Venables, Anthony J. *“Economic Geography; spatial interactions in the world economy”* London School of Economics and CEPR, 2005
- Venables, Anthony J. *“Trade, location and development: an overview of theory”* London School of Economics and CEPR, 2001
- Wenger Vieli Belser *“Special Economic Areas of China and WTO – Will the Privileges Survive?”* Beijing, 2003

Xiaojuan, Jiang “*FDI in China Contribution to Growth Restructuring and Competitiveness. In: China in the 21st Century*”, Science Publishers, Inc. New York, 2004
(Chapters 2, 9, 10)

On-line Sources

Chinagate.com “*Training Programme Set for Shenzhen Migrant Workers*” September 4. 2006
<http://www.chinagate.com.cn/english/reduction/48625.htm>

China Labor Watch, “*Minimum wage standards in Guangdong*” last updated October 2003
<http://www.chinalaborwatch.org/reports/030910.htm>

China.org “*Guangzhou to Ensure Safe Baby Delivery for Migrant Mothers*”
Original source Xinhua News Agency, February 27, 2006
<http://china.org.cn/english/China/159382.htm>

China.org.cn “*Peripheral Citizens – The 2nd Generation Migrant Worker*”, December 31. 2005
<http://www.china.org.cn/english/China/153899.htm>

Dongguan Foreign Investment Center “*Invest Dongguan*”, last accessed on October 15. 2006
<http://www.dgfipc.gov.cn/eindex.asp>

Gov.cn “*Shenzhen launches pilot scheme to benefit migrant workers*” April 3. 2006
http://english.gov.cn/2006-04/03/content_243493.htm

Guangzhou Municipal Board for International Investment, “*Invest Guangzhou*”
last accessed on October 15. 2006
<http://www.investguangzhou.gov.cn/>

ILO, *Labour Law and Labour Relations Branch (LEG/REL)* “*EPZ Project*”, ©1998
<http://www.ilo.org/public/english/dialogue/govlab/legrel/tc/epz/index.htm>

ILO, “*EPZ Employment Statistics*”, updated February 2004
<http://www.ilo.org/public/english/dialogue/sector/themes/epz/stats.htm>

News Guangdong, “*6m yuan to reward workplace safety*”, Last updated by July 2006
Original source Szdaily [Shenzhen Daily] web edition
<http://www.newsgd.com/news/Guangdong1>

News Guangdong, “*Migrant workers more prone to injuries: survey*”, Last updated September, 2005, original source Szdaily [Shenzhen Daily] web edition
<http://www.newsgd.com/news/Guangdong1>

SACOM, Students and Scholars against Corporate Misbehaviour “*Occupational Injuries in Guangdong*”, August 18. 2005
<http://www.sacom.org.hk>

Shenzhen Investment Bureau, “*Invest Shenzhen*”, last accessed on October 15..2006

Sumner Lemon, IDG News Service (Beijing Bureau), "China's Guangdong Province Ups Minimum Wage", July 13, 2006

Taipei Times, page 9 "Poor working conditions plague Guangdong", February 5, 2005, original source AP, Dongguan

Wikipedia, "*Dongguan*"
<http://en.wikipedia.org/wiki/Dongguan>

Wikipedia "*Shenzhen*"
<http://en.wikipedia.org/wiki/Shenzhen>

Wikipedia "*Guangzhou*"
<http://en.wikipedia.org/wiki/Guangzhou>

Xinhuanet, "*Population in Shenzhen increases 31 times in 25 years*", last updated August 2005
<http://english.sina.com/china/1/2005/0821/43131.html>

Interviews

Professor William Barron, Hong Kong University of Science and Technology and Civic Exchange, Hong Kong 2006-04-19, 2006-04-24

Mr. Johan Blücher Manager, Swep, Guangzhou 2006-06-26

Mr Ben Lin Chubin, Institute for the Environment, Hong Kong University of Science and Technology, Hong Kong 2006-04-24

Mr. Peter Grufman, Managing Director, LC-TECH, Shenzhen 2006-06-27

Mr. Brendan Kelly, Factory Manager Tetra Pak, Foshan 2006-05-23

Mr Li, Plastic components, Dongguan 2006-05-24

Mr M. N., Purchasing Manager of a large European electronics company, Hong Kong 2006-04-16

Professor Pun Ngai, Hong Kong University of Science and Technology, Division of Social Science, Hong Kong 2006-05-18

Mrs Pang, Manager, Textiles, Guangzhou 2006-07-07

Mr G. S. Production/Outsourcing, Gifts and Packaging, Guangzhou 2006-06-21

Mr Wang, Manager, Sub-contracting/Outsourcing facilitator, Guangzhou 2006-07-06