NORGES HANDELSHØYSKOLE
Bergen, June 14th, 2007

Special Economic Zones

Policy Review and Implications for India

Erlend Reigstad

Advisor: Professor Eirik Vatne

Master of Science, Major in Economics

NORGES HANDELSHØYSKOLE

Abstract

The thesis deals with special economic zones (SEZs). The first part, chapter 2-5, explains them as a phenomenon. Their history and features/incentives are spelled out, as are their underlying rationale – the advantages the host can achieve through them (chapter 4.1). These possible advantages include increased employment; cluster effects; technology transfer and training; partial policy reforms; laboratory simulations of economic policy and being a means of regional policies. An important way SEZs can achieve this is to attract foreign direct investments. Also the possible costs of zones are presented (chapter 4.2) as well as their alternative cost (chapter 4.3). To complete this part of the analysis chapter 5 presents the point of view of the firms, i.e. the investors SEZs are supposed to lure.

The second part of the thesis, chapter 6-7, applies the first part on the case of India. This results in some specific advice, implications, for the SEZ policy of India. These include *using SEZs as laboratories to find beneficial general economic policies and SEZ policies; to include the Indian diaspora to a greater extent to achieve the chapter 4.1 advantages; the promotion of cluster effects; as well as others*. The rapid change in the Indian economy increases the uncertainty, but the main recommendations should be robust in all likely scenarios.

Table of Contents

1. Introduction and Motivation

This thesis will deal with the concept of special economic zones (SEZs). More specifically: demarcated zones, holding special economic privileges over the general economy, where production of trade and services take place. As it is a rather fuzzy subject I start by putting it in a context – general economic policies – and presenting a brief history. Then I discuss some advantages and disadvantages, from the hosts' as well as the potential investors' point of view. Finally I present the case of India, concluding with policy recommendations. The recommendations include some novel parts, to my knowledge not treated much in the literature.

The literature on the topic is somewhat limited. Paradoxically, this has led to inflation in the reference list, because many sources just touch upon the topic in parts of the text. The last major reviews are all from the World Bank, respectively Madani (1999); Kusago and Tzannatos (1998) and World Bank (1992). Statistics are scarce, making it hard to do any quantitative analysis. As do differences between corners of the world make comparisons between countries complicated – though some are made.

My interest in economic geography started with the elective courses in my Bachelor's degree at NHH. This included a field trip, visiting one of the Maquiladoras in Reynosa, Mexico – sparking my interest in the phenomenon of special economic zones. When doing a Master of Science degree in economics later on, I chose the Maquiladora industry as the topic of one of my term papers, as well as opting for courses dealing with international issues, particularly trade, investments and decisions of location. An exchange stay at the Indian Institute of Management – Ahmedabad (IIMA) spurred me on to the case of India, especially so since the revitalising and planned extension of special economic zones was the topic *du jour*, omnipresent in media and conversation.

I would like to give thanks to my advisor, Professor Eirik Vatne, for valuable discussions and inputs along the way. Also, a scholarship and stay at the Nordic Institute of Asian Studies (NIAS) provided good help. My exchange stay at IIMA certainly added to the interest as well, this would not have been possible without the broad network of partner schools NHH has built.

2. Basic Principles of Economic Policy

Since man grouped together, forming tribes and later on cities and civilisations, there have been economic policies, coined by the leaders of society and/or the general population. These started as simple rules, e.g. division of agricultural land into parcels; taxation for financing of common goods or redistribution of wealth; or even embargos against competing groups. Later we saw the advent of the monetary system[1], a great increase in trade, a near-exponential growth in technology and eventually also the economic policies of today.

A fruitful division in the analysis of economic policies is between the macroeconomic level and specific policies on lower levels. *Lower level does not mean regional/local level or a level of less prestige.* This is primarily a classification of mine between macroeconomics and microeconomics.

The macroeconomic policies are normally rule-based[2] and stable, that is: policies are made for the long-run. Examples include the rules for interest rates which are often decided by an independent central bank through inflation targeting or other targets, and overall trade policy. Lower level policies, on the other hand, are very often up to the discretion of elected politicians. Everyday examples are measures to increase educational attainment, design of an effective health care system and regional policies to support depressed areas.

The last example constitutes important elements of special economic zone policies. Even though I will not do much analysis on regional support per se, the instruments are quite the same as the ones found in SEZs.

[1] With the revolutionary concept of money *representing* value through a guarantee, while it used to hold value through the scarcity and usefulness of its material.
[2] Rules can still be changed by the politicians also in the short-run, but the threshold is much higher when they have to "break" specific rules. Rules have been found to outperform a more flexible policy set, see e.g. Kydland and Prescott (1977).

2.1 Why Economic Policies?

While a few laissez-faire minded people would argue there is no need to regulate the economy at all, most agree that state intervention is needed, though the exact level is highly disputed.

The goals of economic policies are still redistribution and financing of *common goods*. Common goods are non-rivalrous, non-excludable goods and services, e.g. the defence of a city by the building of a city wall. They are normally underprovided in a free market, since those financing it can not charge others fully for their positive externalities. Redistribution is now mostly from the rich to the poor (while earlier the kings would often tax the serfs for their own enrichment). The responsibility of the state now include[3]: law and order, defence, education, healthcare and provision of many other services. For societies to keep up these expenditures they need to have income, taxation, as well. This is achieved through direct taxes: income tax; wealth taxes; inheritance tax and tariffs/duties – as well as indirect taxes[4]: state-run monopolies; expropriation of property; state ownership of resources, land, business; et cetera. In addition there are policies that do not cost much, but can bring large benefits when implemented properly. An example is the interest rate, when leading a sensible monetary policy this stabilises the economy to the benefit of all, but when monetary policy is bad this can wreak havoc, still at the same expenditure.[5]

Most agree that pure common goods need public financing, thus accepting that the state needs income (through taxation as mentioned above) as well. Pure common goods are hard to find in reality, but all products with positive externalities that cannot be fully charged can be thought of as partial common goods, which are expected to be underprovided in a free market. Likewise there can be negative externalities, so that the production cost of goods and services do not comprise the full cost, e.g. when causing pollution affecting others. As a result economic policies should be applied to remove these inefficiencies, which is really a question of correcting the prices. From the side of the government activities with positive externalities are encouraged through subsidies (Pigouvian subsidies), while Pigouvian taxation is the major

[3] Many will dispute some or all of these, others would include many more, but I believe this list is uncontroversial.
[4] Many will not think of these as taxation, but they do have the alternative cost of being abolished, for example the state handing out shares in companies to citizens.
[5] The economic expenditure, that is. There can be a substantial political “expenditures” (costs), say, of increasing interest rates when (myopic) people are heavily indebted.

device to hinder activities with detrimental externalities. Private people and companies cannot exercise the same coercion, but are known to use the legal system, which is therefore part of the economic system, or other persuasion to impede activities of others that are negative for them, while seeking cooperation with[6] or rewarding those whose activities bring positive externalities.

Many feel some redistribution is also precedented – this policy has been popular enough to gain momentum in most countries. As for the level it differs a lot, especially between rich and poor countries, but also between countries in these sub-categories, with Scandinavian equality versus American entrepreneurship as a fitting, though maybe overstated, example.

These two – externalities and redistribution, often in a combination – should make up all economic policies. True, in a political economy there can be loads of proposals and implementations that are not rational, but even then it will be based on one or both of these. An example: IT Fornebu in the outskirts of Oslo may have been hyped out of all proportions, but the reasoning was that externalities would emerge to make it an economic success. Another example is that when populist politicians promote policies that will harm the country, their support is contingent on the fact that supporters believe they will benefit.

An additional note that needs mentioning is that taxation often causes distortions. Lump-sum taxes are preferable, but rare in real life. One notable exception is taxes on negative externalities, Pigouvian taxes. To cover the rest of its financing needs the state also needs income from a distortionary tax-base. When this is the case the benefits need to be weighed against the cost, which typically is calculated as a percentage, as the Norwegian 20 % measure. (NOU 1998:16) Trade policies can be neutral, but are often found to be highly distortionary. An analysis of distortions in developing countries is given in Krueger (1984).

Finally there is the question of transaction costs. One application is how the cost of dealing with several parts in a transaction can make excludable externalities in fact non-excludable, because of high transaction costs relative to small fees. Also, standard economic theory often assumes perfect information, hardly the case in most markets. Many mechanisms exist to increase the information level when asymmetric information is the case, it happens through

[6] Trade associations are a common measure to internalise the costs for investments with externalities, e.g. marketing, into a common organisation. In a way this can be seen as a private “alternative” to economic policy.

the market (e.g. programmes on commercial TV channels testing products) and by the government (e.g. state run websites comparing prices of comparable goods and services). When the market to supply this information fails – say, by being dominated by non-trustworthy sources – this points in favour of governments supply (if the government is more to be trusted, that is).

Transaction costs are also the case when lack of infrastructure makes it difficult to change suppliers. This should be analysed and rectified using the same framework as above, e.g. look at the level of non-rivalrousness and non-excludability of goods and services to determine whether infrastructure should be subsidised.

As so many other policies SEZs are a mix of the two aforementioned reasons, both an instrument of achieving economic efficiency and of redistribution. The balance depends on the country in question, but generally the creation of positive externalities benefiting the rest of the economy is the dominant rationale. As will be elaborated on later the desirability of this depends on its positive and negative effects, as well as the alternative cost. To which extent special economic zones are recognised as such varies a great deal. They are, however, popular, especially so in developing and transitional economies. I will spell out what they are mainly through their history and features, and also by discussing some of the major advantages and costs of using them.

3. Definitions, History and Features of Special Economic Zones

3.1 Definitions

To analyse the topic of special economic zones, one first needs to sort out the nomenclature of the subject. Kusago and Tzannatos (1998), find that no less than 19 different terms are used to describe very similar, often identical, phenomena. Of these I will only mention some, but a copy of his usage list and literature review list is found in the appendix, chapter 9.5, for reference.

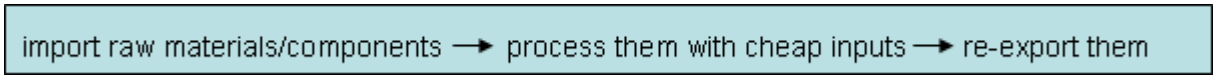
An important note to make is the inconsistency in the lingo. The choice of term and actual meaning of it depends on the author; some do not seem to differentiate at all between the terms.

Many of the terms used include the word *free*. Tax free zone, tax free trade zone, free trade zone, free zone and export free zone are examples, all indistinguishable from each other in terms of meaning. Thomas define them as

> *… an isolated, enclosed, and policed area, in or adjacent to a port of entry, without resident population, furnished with the necessary facilities for loading and unloading, for supplying fuel and ships' stores, for storing goods and for reshipping them by land and water; an area within which goods may be landed, stored, mixed, blended, repacked, manufactured, and reshipped without payment of duties and without the intervention of customs officials.* (Thomas, (1956), p7)

as early as in the 1956 “Free Ports and Foreign Trade Zones”. This definition highlights their function as trading and re-shipping posts. Later the revolutionary decline in transportation costs and emergence of standards[7] made it possible to move goods efficiently towards where processing had comparative advantages, thus the approach of

Figure 3.1 Simple Import-Export Model



[7] E.g.: the containerisation revolution.

gained momentum. See also the discussion of the OLI-framework in chapter 5.1. The generally high duties in this era called for an exception to facilitate this specialisation, namely duty-free imports of goods that would be exported.[8] Thus the "free trade zones" evolved into what would better be described as export processing zones. Rondinelli (1987), p91 describes how in many Asian countries the terms FTZ and EPZ are used interchangeably.

"Export processing zone" (EPZ) is the most common term in the genre. Warr defines it the following way "Export processing zones (EPZs) are economic enclaves within which manufacturing for export occurs under virtual free trade conditions." in the abstract of the 1988 "Export Processing Zones – The Economics of Enclave Manufacturing". This is a generic definition that also fits most SEZs very well, naming that there should be enclaves (i.e. a defined area), manufacturing for exports and free trade conditions. If any criticism is to be made it would be that (1) it omits trade in services[9], probably because this was not that much of an option in 1988, and (2) that it is not whether the markets are free per se, only how relatively free the trade conditions are, that counts – they should be significantly freer than in the rest of the host country.

World Bank (1992), p24 describe export processing zones (EPZs) as existing of the free trade zone element and industrial park element. This serves as a fruitful division – though there can be other elements as well, these are always present and important. More about this in chapter 3.2.

When I choose the term *special economic zones*[10] this is for two reasons: (1) This is the term currently used in India[11] and India is the country I will apply the analysis on. (2) My policy recommendations will be going a bit outside the conventional box of attributes associated with EPZs, therefore the semantically broader word *special* is more fitting. I choose the definition of Ge, which is rather broad.

[8] The Mexican Maquiladoras are good examples of this business model. They were originally all placed along the border with the USA, where components were easily transported from its neighbour, cheaply assembled by Mexican labour and re-exported north.
[9] On the other hand, processing is a word not normally used about services, except data processing – therefore EPZ should neither way be used referring to services.
[10] This is sometimes written as just "zone", to add some variation.
[11] Apart from India it is also the term of choice in China. I assume this is why India changed from EPZ to SEZ in the first place, seeing how the Chinese example has set the agenda in Indian public opinion with its comparable success.

> *…a special economic zone may be characterized, in general terms, as a geographic area within the territory of a country where economic activities of certain kinds are promoted by a set of policy instruments that are not generally applicable to the rest of the country.* (Ge (1999b), p1268)

However, where my text is unclear it should also be interpreted as a zone in a *developing country,* with features as such.

3.2 History of Special Economic Zones

If allowing for only the free trade zone element, one can say that the history of the zones date back at least to the days of Alexander the Great.[12] Then, the emperor protected the merchants of Tyre after besieging them, thus drawing trade to the place. Another example is the judicial special privileges in trade that certain cities would often enjoy; a nearby example is the exclusive trade the city of Bergen had in stockfish and other products of Northern Norway.

A more recent example – incorporating the industrial park and thus much more similar to the SEZs I explore in this thesis – is the first full-fledged industrial estate, set up in Manchester in 1896. In the following 50 years copies spawned all over the western world, especially in the US. Then followed the developing and transitional nations, starting with a Puerto Rican private venture in 1947. The first public industrial estate was set up in Singapore in 1951. India, the Dominican Republic and Taiwan all started building export processing zones in 1965. Simultaneously Mexico started the maquila program where Maquiladoras could be established with duty-free imports for re-export. In the ‘70s and into the ‘80s SEZs flourished, in Southeast Asia, Latin America and to some extent in Africa and the Middle East and the rest of Asia. The concept is certainly still alive and well, employment has surged from 220 000 in 1978 via 374 000 in 1986 to 530 000 in 1990. (World Bank, 1992, pp24-27) Presumably using different definitions Rondinelli, 1987, p92 estimates the number of EPZ-jobs in developing countries to 3.5 million.

[12] This is pointed out in Miyagiwa (1986), p1, referring to the October 1980 number of a magazine or journal called Distribution, which I have not been able to get hold of.

A sidetrack is the simultaneous emergence of modern states, with increased influence of national governments. This rendered possible an increased extent of the policy to support depressed areas. For these to be effective they should be targeted responses aiming at the problems faced.[13] The areas in question might become the recipients of subsidies and be favoured in terms of business support by central or local government. Usually they would have strict limitations on eligibility[14]; otherwise a bottomless drain of expenditures would often be the consequence. There can for example be a government grant for establishing a certain place if bringing a certain number of jobs if this place has a large unemployment rate. Other examples are sale of real estate under market value to potentially establishing business and to put up public research facilities to lure them. Such policies have been used virtually everywhere, especially in the post-World War II period, when the belief in state intervention was particularly strong. Lately this has become less in fashion, part because of economic liberalisation, for example through the advent of international bodies governing trade, with the aim of achieving efficiency by removing unfair trade practices. One example (though disputed) is how the EFTA Surveillance Authority (ESA) made Norway abolish its practice of differentiated employers' contribution taxation. Still, several policies aim at regional development in lagging areas – the use of € 135 billion annually by the EU is a prime example in this respect.[15]

Back to the industrial estates, man developed ever new knowledge about the determining factors to make them a success, such as the importance of infrastructure, how comparative advantages should be exploited, et cetera. This will be explored later on in the paper.

3.3 Features of Special Economic Zones

SEZs are one of many means to attract foreign investment, generate employment, earn foreign exchange (Rondinelli, 1987) and sometimes to improve the terms of trade for native firms. In SEZs laws, rules and legislation can be altered, depending on which problems are more imminent in the particular setting. However, a few features – i.e. incentives for firms – are

[13] E.g. if the problem is lack of infrastructure a subsidy for R&D is less than optimal.
[14] Especially in terms of location.
[15] This is channelled through the Structural Fund, Objective 1. See http://ec.europa.eu/regional_policy/objective1/index_en.htm for further details.

typical: tax breaks; relaxed legislation; improved infrastructure; reduction of red tape; absence of labour union activity; subsidised land; bureaucracy less susceptible of corruption and greatly reduced customs procedures/rates.

3.3.1 Tax Breaks

To attract enterprises the host economy will often offer a tax break. This can be given as a cut in the corporate tax rate and/or as a tax holiday, where tax is waived or postponed for a number of years, normally on the condition that profits are re-invested.

3.3.2 Relaxed Legislation

Extensive regulations can be an important reason why companies hesitate to invest. One example is when there are strict rules against firing labour, then we will expect fewer workers to get employed – because employers fear that they cannot get rid of them in a downturn. In this case a loosening of the regulations can lead to higher employment, through a better investment climate. Another common example is environmental regulations, some countries are more than happy to allow some pollution for a bit of investments. As discussed later there can be differences in the actual execution of rules, making a seemingly more relaxed legislation leading to a stricter regime, though with a higher degree of predictability.

3.3.3 Improved Infrastructure

In some countries infrastructure is in a sorry state, and can in no way be expected to reach an adequate level in the near future. When this is the case there can be good reasons to focus investment in a limited area, i.e. the SEZ. This can be seen as a stepwise build-up, where a commercially interesting area receives preferential treatment in the allocation of funds, to attract investment. Sometimes the opposite can be the case, firms establishing in the SEZs are required to build up collective infrastructure, e.g. roads, railroads, ports and airstrips.

3.3.4 Reduction of Red Tape

Excessive bureaucracy can be a significant detriment for investments, especially from foreign units, as their informational barriers are higher. An example of how bad it can get is found in

Mohan (1993) pp96-97 and is attached in the appendix, chapter 9.1. Part of this problem is known as regulatory capture, a review of the subject is found in Dal Bó (2006).

3.3.5 Reduction of Duties and Customs Procedures

Where red tape represents bureaucracy that is clearly uncalled for, this point is more about creating a fast-track road to ensure effective procedures where the import-export approach is used (see figure 3.1). By separating them from red tape I acknowledge that cumbersome procedures and high duties can be chosen on purpose, e.g. to protect domestic industries, which is hardly the case of red tape.

3.3.6 Absence of Labour Union Activity

This can be crucial in countries where labour unions are powerful and hostile to business, as is sometimes the case, maybe particularly so in some former communist run nations. There is further the possibility of closer cooperation with the unions in SEZs, to facilitate a good business climate.

3.3.7 Subsidised Land

When the SEZ is located in a less desirable location this can be a means to attract companies that normally wouldn't consider investing here. See chapter 4.1.7 on regional policy.

3.3.8 Avoidance of Corruption

Where corruption[16] is a big problem among lower-level officials this can be remedied by removing contact between business and bureaucracy. Thus, the pestilence of bribery and pay-offs can be diminished. An example is when police officers are known to take bribes; then it can be beneficial to use other agencies as acting law enforcers on the premises.

3.3.9 Clusters

Clusters will be treated in detail in chapter 4.1.3.

[16] According to Transparency International the costs of corruption can not be quantified, due to their nature of being hidden to the public. There are, however, no doubt that corruption impedes investments, as it increases costs and risk for investors, much the same way as the lack of rule of law does.

These are the features we often observe, some objectives in their own right, some as initiatives to obtain other advantages, mostly by being incentives for the firms. The next section will deal with some of these specific advantages that zones try to achieve and disadvantages people fear from them. As for the mentioned nine points I will come back to them in chapter 4.3, where the alternative cost is discussed.

4. The Countries' Point of View

This section presents arguments pro and contra special economic zones for the host economies. There is also a special section on the economic modelling of SEZs, presenting a literature review on this particular subject.

4.1 Advantages

To analyse the advantages of SEZs I will start by presenting an underlying driver – attracting foreign direct investments – using SEZs as a medium. This is not an advantage on its own, rather a means to achieve other advantages. True, not all business in an SEZ is conducted by foreign firms, but most of those that are not fully or partly owned by foreigners will at least export, thus seeing some of the same effects through trade networks.

Afterwards I will discuss the major channels of benefits (in no particular order): unemployment reduction; cluster effects; technology transfer and training; SEZs as an instrument of partial policy reform; SEZs as laboratories and the option of using them for regional policy. Some of these are interlinked, e.g. can training be one of the cluster effects and the line between laboratories and partial policy reform is sketchy.

4.1.1 Foreign Direct Investments

(This part draws on Barba-Navaretti et al., 2004)

Foreign Direct Investments (FDI) are "investments by a multinational company in establishing production, distribution or marketing facilities abroad". (Pass et al., 2005, p209) As is explained in Hausmann and Fernández-Arias (2000), p14 it also includes loans given from a parent foreign owner to a local company. Further, Barba-Navaretti et al. (2004), define multinational enterprises (MNEs) as "firms that own a significant equity share (typically 50 percent or more) of another company operating in a foreign country". MNEs have been steadily on the rise since the mid 1980s[17], are mostly large companies originating from developed countries, are often in knowledge intensive industries, and, finally, do business mostly in developed countries, but more and more in developing countries as well ("The

[17] See graph in appendix, chapter 9.4.

facts: empirical overview" from ibid. chapter 1.2). These MNEs are the same as those discussed in the chapter "Technology Transfer and Training".

Generally FDIs are either greenfield investments, mergers/acquisitions (M&A)[18] or a combination of the two. On the Special Economic Zone-topic, the more interesting case is when new business is established, always the case with the former, sometimes the case with mergers and acquisitions.[19] M&A require well-functioning markets, stock exchanges as well as other markets. This requires sound institutions, such as a well-functioning legal system, transparency for foreign investors and political as well as macroeconomic stability – all this is further discussed in chapter 5. As for greenfield investments the requirements are mostly the same, especially political stability is important, since any risk of future expropriation would reduce the net present value of any investment. In principle both financial and real assets can be expropriated, but financial ones are more easily traded and can thus be off-handed to someone in less risk of intervention, e.g. a domestic investor if they are favoured.

A special vehicle known as joint ventures can often reduce the problems mentioned, as well as bring other benefits. This is discussed in chapter 5.1 in the section on ownership-advantages.

Regarding the desirability of actually getting FDI there are mixed opinions. Many believe that foreign companies are inherently bad, often stating such arguments as MNEs crowding out domestic firms, MNEs treating workers worse, profits being shipped abroad, et cetera. These are all valid arguments, when true[20], but there are also strong arguments pro foreign investments, as will be discussed in the following chapters.

[18] Greenfield investment corresponds to real investments, while mergers and acquisitions are financial investments, in practice the difference is blurred or even non-existent as the latter can lead to real investments, say, by the acquired company to keep producing in a site that would otherwise be de-invested.
[19] M&A is the dominant form of transaction, taking any form from a buyout where the investor holds the firm passively to a takeover followed by full integration.
[20] Often a "bad wolf" syndrome takes place, where MNEs and other large corporations are judged by far harsher criteria than smaller businesses. This sometimes unfair treatment does, however, not remove the need for all firms to get scrutinised by stakeholders.

4.1.2 Employment

Even though wages are low, unemployment rates of developing countries far exceed those of the industrialised world[21], and policies leading to the establishment of new industries are popular. An often stated aim of special economic zones is therefore to reduce unemployment by job creation, and in most cases we find the industries involved to be labour-intensive (Kusago and Tzannatos, 1998). In order to increase the job creation effect, zones are often established in areas where a big number of workers are idle, often backward areas, see chapter 4.1.7 on regional policy.[22] This, however, must be balanced against other considerations, notably necessary amenities such as strong links to the rest of the economy, a pool of skilled labour to facilitate possible higher-order economic activities, infrastructure, etc.

Empirically we mostly find that the activities taking place in SEZs are low-skilled, often assembly work and other basic manual work. (Kusago and Tzannatos, 1998) Still, many zones evolve over time to more advanced activities, as is also the desire of the developing world. An example is how unskilled labourers of SEZs in (then poor) Taiwan in the '60s stitched clothes and assembled cheap toys, while now middle class labourers in a rich country make flat-panel screens in the same zones. (Adams, 2007) The following table from Kusago and Tzannatos, 1998 shows how the composition of the workforce in Malaysian EPZs/SEZs has shifted towards more skilled labour. The same has been the trend for the share of labour intensive industries. (Ibid, p8)

Table 4.1 Example of Changing Composition of Workforce

Changes in the Composition of Workers by Skills in Malaysia (%)			
	EPZs		Manufacturing Sector
	1977	1990	1990
Managerial & Professional	1.0	4.7	4.0
Clerical	5.4	8.1	7.0
Supervisory & Skilled	12.6	20.3	37.0
Semi-Skilled & Unskilled	81.0	66.9	52.0

(Source: Kusago and Tzannatos (1998), p8)

[21] Exact comparisons between countries are next to impossible, as a large set of definitions and ways of measurements are used. But, poorer countries often try to boost their numbers, say, by not including underemployed people in the statistics and generally have fewer benefits to necessitate the collection of accurate data. Richer countries, on the other side, are more likely to include women in the available workforce-number. Keeping this in mind a brief look at the unemployment indicators in e.g. The Economist and CIA World Factbook clearly shows how most developing countries have high levels of unemployment.

[22] This has also been the case in many developed countries, e.g. investments made through "Distriktenes utbyggingsfond" to promote industrial development in rural and semi-rural Norway.

To see the real effect SEZs have on employment one has to remove that job creation which is only crowding out comparable business.[23] This can be achieved if the elasticities of the supply and demand are known, but since it is hard to come up with numbers for these a few other tricks can be employed in the analysis. First; one can examine wages, thus finding out if SEZs are able to oust alternatives. Since wages in most cases are equal to or higher than equivalent work outside the zone, we expect some crowding out to take place, as SEZs attract talent that would otherwise be employed elsewhere.[24] The effect depends largely on the composition of the labour force. Second; some analysis can be based on whom the SEZ businesses employ. We find that in many countries women dominate in SEZs, while men are more commonly employed in the domestic zone, i.e. the rest of the economy.

Table 4.2 Share of Female Employment

Share of Women in EPZ Employment (%)				
		All economy	EPZ	Non-EPZ Manufacturing
Malaysia[1,2]	1980	33.4	75.0	35.6
	1990	35.5	53.5	47.2
Korea[1,3]	1987	40.4	77.0	41.7
	1990	40.8	70.1	42.1
Philippines[1,4]	1980	37.1	74.0	N.A.
	1994	36.5	73.9	45.2
Sri Lanka[1,5]	1981	36.0	86.3	29.8
	1992	46.4	84.8	46.0
Mauritius[1,6]	1984	30.7	78.9	N.A.
	1987	34.4	66.2	N.A.

(Source: Kusago and Tzannatos (1998), p9)

This can be interpreted as evidence for de-facto job creation and, moreover, that women are the main beneficiaries. A credible explanation for this is the lower education level and workforce participation of women in most developing countries – since SEZs primarily attract low-skilled labour and need idle labour, women are over-represented. We see from the data that the female share of the workforce falls over time, coinciding with the increase in advanced activities. This latest train of thoughts hinges on the assumption that female can be used as a proxy for unskilled labour, which I believe to hold true on average in most developed countries.

[23] In an economy based on the assumptions of basic models of economics there would be *full* employment and any distortion would be harmful, as it would take employment from more productive use. Empirically we find that partial *crowding out* takes place, i.e. some employment is stolen and some is added.
[24] Assuming that the wage reflects the marginal productivity of labour, society is better off with higher wages, even if full crowding out is the case. This section, however, only deals with employment.

4.1.3 Clusters and Increasing Returns in Infrastructure

NB! Part of what is often included in the cluster literature is discussed under Technology Transfer and Training (below), therefore these two paragraphs should be seen in the same context. Second NB! There are many types of clusters, differing e.g. in scale. The typical cluster in this context is what Altenburg and Meyer-Stamer (1999) refer to as "clusters of transnational corporations".

A specific form of externalities relevant to special economic zones is (dis)economies of agglomeration. Spatial concentration will have both positive effects (economies of scale in infrastructure, reduced information costs, developed capital markets, etc.) and negative (crowding). Generally the benefits can be divided into urbanisation economies and localisation economies, where the former represents co-location of economic activity and the latter is when a specific industry groups, which is more relevant to SEZs and will be referred to as clusters (short for industrial clusters). Positive externalities in a cluster will often bring increasing returns until critical mass is attained, from whence it will decrease.

Famous clusters are Silicon Valley in California (ICT), the Ruhr industrial area in Germany, City in London (finance), et cetera, et cetera. Some came to existence as a matter of coincidences, some from historical reasons, some from targeted policies, while most for various, sometimes complex, reasons. There is a vast field of research on the subject, both a strain describing the history and distribution of clusters and a theoretical variety that seeks to explain the mechanisms giving advantages to firms in the cluster. (See Malmberg and Maskell, 2001)

Clusters can be categorised as either high-road or low-road, or most of the time somewhere in between these two extremes. (Das, 2005) Clusters in developed countries often lean towards a high-road scenario, meaning that "business dynamism is promoted through investment in efficiency enhancement and innovation" (ibid., p4), while the low-road case most often found in developing countries give few or no cluster benefits, as the firms are unable to concert their efforts due to lack of formal regulation and networking.[25] Examples of enhancements that can be achieved are infrastructure; education/R&D and common market outlets, Brusco (1992) call these "real services". A special feature of clusters is that connections are often informal,

[25] Surveys of this are listed in Nadvi and Schmitz (1994) and Schmitz and Nadvi (1999). The latter also lists several useful references in many topics within the research field of clusters.

based on trust and tradition, thus many will have old histories and creating something from scratch can prove difficult.

As for specific advantages I will mention four of the most significant:

(1) When using the same type of workforce people with the relevant skills will be attracted to the location, since (a) there is increased attention towards that particular place to work, (b) the individual firm has less negotiation power when there are alternative employers nearby and (c) when demand is big enough employers can even concert their effort to educate people with the needed skills or the market or government can establish educational institutions.

(2) The increased market size provides for a more competitive environment in terms of suppliers of products and services. New subcontractors can emerge that would not have been economically feasible if only supplying one firm, consultants working in highly specialised fields can make a living, services catering for many can emerge, etc.

(3) A higher volume of production also means higher output. All else being equal this would mean more competition between the firms, but what is often the case is that customers are attracted to this location because selection is better, often making the net effect positive for the firms.

(4) Firms (or a co-ordinating body, e.g. the government) can split the costs of infrastructure and other investments between them. This is profitable for the non-variable cost, for example the cost of installing an Internet uplink (most of the installation cost is fixed, additional cables to different buildings are incremental) that can then be shared between the participators.

This last point deserves special treatment. The standard assumption in economics is to have decreasing marginal utility on goods, consumption as well as investment. A necessary condition for this to hold is full divisibility of goods. The more relevant measure, however, is average utility per unit investment (return on investment, ROI). The higher the share of fixed costs to variable costs is, the larger the difference between pure marginal utility and ROI. Economists often think of all costs as variable in the long-run, but in the short- and medium-run the fixed costs is definitely relevant, thus it needs to be taken account of. This is what firms do when they “chip in” to pay fixed costs, rather than invest on their own at a higher cost.

As for the former point, decreasing marginal utility, the rationale of clusters is a question of two important adjustments in the theory:

(1) Specialisation is often found to be profitable. This is also a question of pooling the fixed cost, say, by reducing engineering education to only some of the workforce and accounting to others. Specialisation is really part fixed costs in disguise, part uneven allocation of talent.

(2) Bounded rationality also means that the full divisibility assumption will not hold. Nobody holds full information on all markets, in real life man weighs information gathering costs against probable increase in profits, and stop gathering when the marginal cost exceeds the marginal utility (adjusted for risk). Anything that can decrease the gathering costs[26] towards themselves will thus give the firms an advantage; therefore many choose to locate in a cluster, even when competition is fiercer.[27]

Caniëls and Romijn (2003), p276 lists the effects as economies of scale, scope and transaction and "advantages that accrue from firms locating close to each other… consist[ing] of technological or knowledge spillovers". This is just another way of putting it, economies of scale is the underlying force for some benefits, economies of scope comprises most of the specialisation advantage and economies of transaction is the major force of the decreased information gathering costs. The latter part of the quote I will treat separately under the next heading, chapter 4.1.4.

An alternative to clusters would be to put all the activity in one large company and then rationalise away all loss of efficiency associated with competition. Intriguing as it sounds, this may not be such a good idea, as it has been tried in entire economic systems, failing spectacularly. I will not elaborate on this, but briefly mention three reasons why competition normally fares better than monopoly: (1) Monopolies, when profit maximising, tend to increase the deadweight loss when it increases the production surplus on the cost of consumer surplus, (2) Assortment, which consumers value, normally rises when there is competition[28]

[26] This is a question of transaction costs, discussed in chapter 2.1.
[27] This is often found in retailing of products that is only bought now and then, e.g. with cars and furniture.
[28] Khrushchev, in a conversation with Nixon, thought it to be wasteful to have more than one brand of washing machines. (Lexington, "The Politics of Plenty" The Economist, 26th May 2007)

and (3) Competition gives a mechanism to weed out the less efficient producers as they lose in the market place, while new, more efficient, entrants can arrive.

Increasing returns in infrastructure is another example of the full divisibility assumption not holding. The idea is that it will be better to develop areas one by one, establishing a full set of infrastructure in one location, then using the return on investments for the former to finance the latter. (A similar set of reasoning is found in Litwack and Qian, 1998) This is assuming that it is more profitable to invest one unit in one zone than half a unit in each in two zones.

Obviously there will be lots of examples where scattering of resources is less profitable, say when building roads that do not reach their destinations for lack of funds. Still, as a general principle, I think this theory is flawed. Perhaps the most important reason is that empirical result show positive externalities for neighbouring network expenditures, (Lall, 2006). Besides, what is a full set of infrastructure? At one point the marginal revenue is doomed to diminish towards zero. This suggests that it is more a question of finding the equilibrium, where marginal utility meets marginal costs (including opportunity costs), as is so often the case in economics.

For economic modelling of the cluster phenomena and economic geography of regions I refer to Venables (1996) and Krugman (1991).

4.1.4 Technology Transfer and Training

I will define technology in the broadest sense, not only scientific advances but also those relating to skills and even, to some extent, institutions. Regardless of the scope of the definition used, one will find that developing countries, on average, lag far behind their industrialised counterparts. This is more often than not among the reasons they are poor in the first place.[29] Given the importance of technology, a chief aim of nations since the beginning of civilised life has been to get hold of it, through their own advances or by getting it from others. (Root and Ahmed, 1979) This holds true for developing countries and aid as well, the transfer of technology has long been an instrument to promote growth.

[29] I will not go into the perpetual debate whether lack of technology causes other problems (e.g. war) or vice versa, most likely the causality goes criss-cross.

Though it may sound easy to transfer technology, in practice there are struggles. Some of the problem relates to innate incompatibility issues, due to the fact that a technology is developed in a certain environment, it often translates poorly to different conditions. Often the underlying problem is lack of skills, which can be attributed to low levels of education. Other compatibility issues are language, culture, business culture and other country- or region-specific properties. A wider technology gap, though increasing possible benefits from transfers, also hardens the transfer.[30]

The single most important source of new technology in the developed world (OECD, 2001) are multinational enterprises (MNEs)[31], holding many patents and lots of know-how, spreading it through their area of operations, comprising of more and more of the world. The Japan Bank for International Cooperation lists four channels for technology transfer through MNEs to take place:

> *(1) vertical linkages with suppliers or purchasers in the host countries, (2) horizontal linkages with competing or complementary companies in the same industry, (3) migration of skilled labour and (4) the internationalisation of R&D.* (JBIC (2002), p58)

This report lifts the vertical linkages argument as the *strongest and most consistent*, especially because MNEs rely on and try to improve local suppliers. I will, however, also emphasise the second point, which is all about the economies of scale and scope discussed under the last heading, rendering a market for auxiliary goods and services possible, facilitating best practice approaches, et cetera.

As for the skills part, evidence on technology transfers from developed to developing countries are mixed.[32] There haven't really been that much research on the topic, but the work that has been done suggests many firms do not provide much formal training.[33] Small firms

[30] See Lucas (1993) for an analysis on how the consumption in less advanced economies mitigates the returns on technology unless there is free trade with advanced economies.
[31] UNCTAD (1999), p. 199, estimates just 50 of the US's leading firms accounting for nearly 50 per cent of industrial-based R&D expenditures in 1996.
[32] E.g. is Slaughter (2002) slightly positive, while Tan and Batra (1995) are mostly negative. See p16 in the former for references on the topic. Haddad and Harrison (1993) do empirical testing on the subject, finding that the main technology transfer is in the form of a one-time increase when foreign firms establish, giving some credential for subsidies/zones. They do, however, call for more research, particularly case studies.
[33] This and other on-the-job acquisition of relevant skills is named short-term, firm-level activities by Slaughter (2002), p8.

are laggards in this field, logical, given that "poor information about the benefits of training, the high training costs from the inability to exploit scale economies in training, weak managerial capabilities, absence of competitive pressures, or market imperfections" (Tan and Batra, 1995, p33) are the main obstacles. It is found that companies are more likely to provide training when they employ an already high-skilled work force[34], when they produce technology intensive products, have foreign capital participation and are exporters. A possible flaw in these findings is that training for lower-skilled labour often is of a more mundane character, often through learning-by-doing. The learning of these simple skills may not be recorded, but can be just as relatively important as advanced training for educated people. Another point that may go unheeded is the increased demand for skills and education[35] – as more firms establish in a labour market the returns on education and procurement of skills can increase, and thus incentives are made for governments to prioritise education and people to get educated.

A proper treatment of institutions far exceeds the scope of this thesis. See chapter 5 for how it influences the firms. As for transfers of this "technology", this can be analyzed much the same way as education: (1) there is a supply side where foreign firms teach the country, bringing knowledge on how to run things and (2) there is a demand side where the same firms demand proper conditions or else take their business elsewhere. Of the two I believe the latter to be important, though often not in a direct way. The former is seldom achieved, since it is to high extent positive externalities that will not get charged their full value and thus get underprovided.

The cluster nature of special economic zones should provide for more technology transfers between firms in the zone, as friction reduces with distances. See for example under the last heading, chapter 4.1.3, how labour can be mobile between the firms, as can joint ventures be easier to establish and word of mouth can distribute the latest "buzz", et cetera. A large problem is technology transfers to the general economy, since SEZs are in fact often very much closed. Rondinelli (1987), p97 criticise them for this with his statement that "EPZs and FTZs are usually designed so that they turn out to be "enclave" activities that have few backward or forward linkages with local economies"

[34] Even though MNEs put relatively low-skilled activities in developing countries, they are often more advanced activities than the rest of the economy.
[35] Referred to as "long-term, country-level activities" by Slaughter (2002), p8.

Some isolation is necessary, inasmuch as they have different rules and regulation than the domestic area. But, it is very detrimental for technology transfer. This needs to be tended too, by reducing the curbing of contact between the SEZ and its neighbours, say, if firms outside the zone cannot do subcontracting for the firms inside there will not be any consenting technology transfers, thus greatly reducing it. Some transfers will occur regardless, especially through firms operating both inside and outside the zone and labour that is partly mobile.

On the other hand, special incentives for knowledge sharing to firms outside the zone can be the case for SEZs, then the net difference from ordinary FDI establishing in clusters can be positive in favour of zones. A practical approach to avoid extortionary policies chasing investors away can be to brand it as corporate social responsibility (CSR), giving benefits to both the host and the firm. (te Velde, 2002, p12) An SEZ can be useful in organising such schemes, but is hardly indispensable for this means when compared to other policies.

4.1.5 SEZ as an Instrument of Partial Policy Reform

One way to treat special economic zones that can circumvent the first-best paradox is to reject the better options as infeasible in the near future, given a political system where politicians seek re-election and the publics' (i.e. the electorates') bounded rationality stops them from seeing the full benefits of a general reform.[36] Thus policy-makers have incentives for shorter-run measures, especially as long as these are Pareto improvements.[37] This is reinforced by the instances where policies are discontinued by shifting governments due to changing priorities, favouring quick fixes over sound macroeconomics.

Moreover, in many cases the historical behaviour from governments give fears to the investors that expropriation, sometimes in the form of excessive ex post taxation, will take place, meaning that measures must be taken to reduce this perceived risk. Litwack and Qian (1998) describe how an SEZ, through reformation of some parts of the economy, can function as a shield against this risk, while still obtaining the necessary linkages to generate benefits, e.g. tax creation. Spinanger (1984), p65 (quoted from Warr (1988), p2) emphasizes how zones

[36] Miyagiwa (1992) argues how it might just as well be politicians themselves that oppose reform, e.g. because then they don't have to face protests from vested interests.
[37] Turunen-Red and Woodland (1991) treats the case of tariffs mathematically, giving the necessary conditions for partial reform of these to be welfare-improving. Much of this analysis is analogous for other reforms as well.

can be used “to correspond more closely with the factor endowment of the host country”, analogous to a movement towards free trade.

The important part is that SEZ-policies must be evaluated against the relevant alternative, which often will be no action at all, and not the first-best scenario. This introduces counter-factual arguments, such hypothetical scenarios have wide distributions of possible outcomes/risk in the assumptions. One caveat of this is that (possibly rent-seeking) proponents can use the “otherwise nothing will happen” argument on zones, but I haven’t seen this argument much in the debate so far.

For more general literature on partial policy reforms I refer to Scweinberger (2003), p697.

4.1.6 Laboratories

SEZs can also be used as a laboratory. I find it a bit puzzling that this function is not a more present topic in the academic literature about special economic zones. That is: I can easily understand why the production of the common good knowledge is not the prime target of, mostly impoverished, nations seeking to develop. But, I would expect economists, operating in a world of lacking data and few opportunities for experimenting[38], to grab any chance for doing so by both hands. Maybe the reason so little empirical work has been done on the subject is that most countries tend to stick to one policy at a time, reducing the variation needed to conduct proper econometric analysis.

However, economies that have utilised SEZs have often used a best-practice approach, where successful policies are distributed to the economy outside the zones, while others are scrapped. Scweinberger (2003) claims that this learning by doing was part of the motivation for China to introduce their zones, as a result of unknown, possibly large, structural adjustment costs (see below).

The difference between SEZs as partial policy reforms and laboratories are twofold: (1) The intention is different: laboratories are means of research on policies; partial policy reform is

[38] Trying out different sets of policies would be unique in social sciences, but is, alas, not often feasible. As for, say, macroeconomic policy no one would seriously putting a whole economy in peril just to expand the variation in a dataset for empirical economic research. Adding to this there are often few relevant observations in time, due to yearly observations and a short history of modern nations and economies.

instead of full reform, either because it is not wanted or because it is not feasible. (2) Laboratories can and should use different policies simultaneously in different zones; the partial policy reform argument only recommends using the policy that would emulate full reform.

4.1.6.1 China/Shenzhen Case Study

After the isolationist policies of Mao, China under Deng Xiaoping started a gradual opening of the economy and economic reforms from ca 1979. As the Chinese leadership were wary of western-style capitalism, they did a trick, employing special economic zones as proving grounds – laboratories. Four SEZs were started, where the objects "were to experiment with the development of an outward-looking, market-oriented economic system, and to serve the country as a "window" and a "base" in these aspects. Through the window, the rest of the domestic economy could be connected to the outside world, even without leaving the door wide open." (Ge, 1999b, p1268) Further: "the SEZs functioned as a laboratory where various methods aimed at overcoming drawbacks associated with a central planning system could be developed. Fresh concepts and means that originated in a market economic environment outside China could first be introduced into, absorbed by, and tested out in the SEZs." (Ibid.)

The largest SEZ at the time was Shenzhen, a backward area just across the bay from Hong Kong. This one also proved the greatest success[39], averaging an average real growth rate of 35.5 % from 1980-1995. (Ibid. p1272) Largely as a result of the SEZ results, in 1984 China opened 14 major cities to foreign direct investment, including Shanghai. Moreover, successful economic reforms were implemented nationwide; see Ge (1999b), p1282 for specific examples.

4.1.7 Regional Policy

As mentioned earlier, SEZs have been used to subsidise certain, normally depressed, areas, in developing as well as developed nations. The desirability of this is a matter of preferences[40], but obviously targets can be met in efficient as well as inefficient ways. Whether SEZs meet the criteria to be considered efficient depends on numerous variables, too extensive to analyse

[39] A digression: the 7/11 cup in front of me lists 20 cities, among them Shenzhen in company with Singapore, Istanbul, Toronto, etc. Not too bad for what used to be a fishing village not long ago.

[40] An example of such a set is to attribute a higher utility for increase from lower levels, i.e. a falling marginal utility rate of income. With this preference set it would be better to increase the income level from 10 to 11 than from 20 to 21, meaning that there are combinations where a smaller total increase is desirable, due to better distribution (equality).

in detail here. The aforementioned are all important, but the cluster-argument poses a greater challenge, since there will normally be less of an already existing base in depressed areas. Also the alternative cost should always be considered.

SEZs are chosen as a means of subsidising since they are very geographically bounded instruments, making it hard for business to pick subsidies from these areas, but take their business elsewhere. Sometimes the reason for choosing SEZs is also their high level of visibility, acting as a tangible example of action by the politicians to present to their constituency.

4.2 Costs

This is by no means a complete list of possible disadvantages from special economic zones, when bad policies are effective the list can extend towards infinity. It is, however, some of the more common criticism, rightly or wrongly so, from both economists as well as non-academics. Criticism from the latter culminated with Nomi Klein's (2000) book "No Logo", a rare example of a book in this genre becoming a bestseller.

4.2.1 Footlooseness

A common criticism of special economic zones is that it brings instability to the host economy through public bargaining. E.g. Hayter (1997), p170 give an account on how MNCs negotiate to make the location better, mentioning briefly that SEZs are popular results (p173). The fear is that since the business is lured by special incentives in the first place, it will be easily persuaded to move to the next location as this undercuts the first in terms. This will repeat itself until all surplus has moved to the companies and none is left with the hosts, a "race to the bottom" effect. Another argument is that much of the business is outsourced from third parties, e.g. component suppliers for the car manufacturing industry. This is a problem since suppliers can be changed. A final concern of many is that investors are normally foreign, which is often believed to increase the risk that they don't feel any local responsibility.

This fear, however, does not take enough into account the substantial costs there are of moving a business and of shifting suppliers. Companies invest substantial amounts of both time and money when establishing, mostly sunk cost if they should decide to move. This also holds true for many transactions with companies, especially when far from home. Establishing new relations with other suppliers can simply be too costly, due to hold-ups in production, transaction costs and – more important than many tend to think – the risk associated with selecting a new business partner. The risk element is also highly present in the locational choice as well, if a place uses special incentives to draw companies – what is to stop them from revoking them later on when companies have settled? For this reason companies nearly always prefer stable, predictable business conditions over small improvements in terms.

As for the last argument, that foreign companies are less “sentimental” about their location. Görg and Strobl (2003) and Bernard and Bradford Jensen (2007) find that multinationals are more likely to exit a market, when company size and industry attributes are controlled for. This is countered by the fact that they are bigger, and bigger companies are less likely to move.

A final argument that needs to be presented in this context, but which I will not elaborate on, is that closures need not be a bad thing. *Creative destruction* is an important factor for entrepreneurship to thrive and to promote efficiency. Still, it’s easy to understand that most would prefer this to not happen to themselves, maybe especially so when resources have been mobilised to attract business, as with an SEZ.

There are measures that can be taken to decrease the level of mobility, but those should be used with extreme caution, as they will often detriment investments in the first place. For example, if an establishing firm is required to set up its own facilities, rather than renting them, a larger proportion of the cost is sunk, thus increasing the cost of moving. But, this might lead to the business not investing in the first place, going to an otherwise less favourable place where turnkey facilities are readily available instead. This is especially likely if the bad news principle is dominant, i.e. conditions may change to a worse scenario, making a de-investment necessary.

All in all the footlooseness argument is probably overplayed, but for some more than average mobile industries it bears some validity.

4.2.2 Foregone Tax Revenues

What would have happened if…? The fundamental question concerning economic policies is what would have happened if they did not take place. Would all the companies that established in an SEZ have established anyway in the country anyway? Likely not. But, if some had established at a higher tax rate, the tax revenue of the government could still have exceeded that with zones. The underlying problem for the government is a variant of price discrimination – they would like to price (i.e. tax) the full surplus, thus leaving companies with just enough customer surplus (profit) to still establish. But, since the customer surplus is hidden from observers and outright tax differences difficult to enforce, companies that were

willing to pay “full” taxes will end up paying less. Some tax discrimination is indeed happening, especially with subsidies and lower tax rate for mobile industries. Another example is auctioneering of licenses.[41]

Another aspect is *when* tax revenues can be collected. Most SEZs with tax rebates have these for a limited number of years, say, with half corporate tax for the first 5 years. This gives an inter-temporal consumption effect, meaning that the government will have to borrow money if they want to spend the money now that they expect in the future. For many developing countries this is only possible with a high interest rate, due to a poor credit history.

Moreover, this can enhance the footlooseness problem discussed earlier, by putting up such schemes they can effectively attract the more mobile firms that are only there for the short-run tax rebate. On the other hand, for some countries this type of self-imposed fiscal discipline might not be so bad after all, but this sort of concession scheme is hardly the first-best approach.

4.2.3 Environmental

Since the attraction of SEZs is to have a more favourable business climate than the rest of the economy it could very well be the case that environmental standards were lowered or abolished so that the zones would eventually fit the pollution haven description.[42] Thus, SEZs would have negative externalities that act as a powerful argument against them. This does not seem to be the case for a number of reasons:

First, multinational enterprises doing business have a lot more to lose from public scrutiny of their wrongdoings. When Coca Cola Company caused a contamination of water resources in Kerala, India this caused a major stir amongst its consumers, leading to substantial losses in revenues and eventually that the company abandoned the venture. I will not take a stance pro or contra, but I will claim that there is no way Coca Cola is the worst offender on such matters in India, but it draws an inproportional amount of criticism. This is the flip side of having a well-known brand name. Empirically we find that companies of developing countries do

[41] Even when the formal reason for this is to retrieve resource rent (say for limited petroleum resources and scarce bandwidth), there can be elements of price discrimination – much the same principle as when amusement parks and phone companies charge a fixed fee + a variable one.
[42] See Copeland and Taylor, 1994 for theory in this field.

indeed pollute more than those of the developed world (Dietzenbacher and Mukhopadhyay, 2007, p428 and Eskeland and Harrison, 2003).

Even when companies in the zone do not fit the "MNE = lots to lose" description like Coca Cola there are reasons why zones could make a positive contribution. First, the fact that there are often economies of scale in waste and pollution management (World Bank, 2001, p20) lowers the cost[43] of acting in an environmentally friendly way. Second, in developing countries lack of enforcement of the law is often a far worse problem than excessively lax regulations. In a zone one can expect the government to keep a closer eye.

Dean et al. (2005) investigates empirically and find that pollution havens hypothesis do not attract foreign investment from the OECD area to China[44] and also source other articles drawing the same conclusions.

4.2.4. Inequalities

There is a concern with some that special economic zones will act to keep or even reinforce inequalities between developed and developing countries. This is supposedly happening by the SEZs being sweatshops. The word sweatshop is used to denote unacceptable working conditions. Long working hours and small wages are important ingredients, sometimes also hazardous working conditions and abuse.

While there is no doubt wages are lower and working conditions worse in special economic zones than in the countries where MNEs keep their headquarters (Kusago and Tzannatos 1998), this is hardly the relevant comparison. Since productivity is lower in the developing countries lower wages is the main raison d'etre in the first place.[45] To see if zones are really beneficial we must compare them to the rest of the economy. This has been done by the World Bank with these findings:

> *"Wages in the zones tend to be equal to or higher than wages for comparable jobs outside the zones and higher than the opportunity cost of most of those employed. Working conditions in EPZs tend to be distinctly better than those outside the zones. Safety and health conditions in EPZs are generally better than the conditions in plants*

[43] See chapter on clusters.
[44] Investments from pollution intensive industries in Hong Kong, Taiwan and Macao, however, are attracted.
[45] As for working conditions there would be a trade-off between these and wages.

> *outside EPZs in the same economies, partly because the EPZ plants are cleaner, better lighted, better ventilated, and more spacious. In simpler industries, such as garments, with inexpensive capital equipment, most EPZ plants work only one shift. However, some EPZ plants, particularly in electronics, work three shifts and others two, so that many EPZ workers are obliged to keep unconventional hours."* (World Bank, 1992, p17)

As for wages there is also a strain of literature finding evidence of higher wages for those employed by foreign firms, see for example Aitken et al. (1996) and Harrison and Scorse (2003).

In light of what is mentioned above I see no reason SEZs should be generally considered to increase inequalities, but rather often decrease the gap between rich and poor countries.

4.3 The Alternative Cost of SEZ

For SEZ to be a first-best solution to the problems it seeks to reduce it needs not only to be working, but to be working better than any other alternative. In real life it is not easy to know what is in fact viable, but drawing a few assumptions an analysis can be made. I have used the non-exhaustive features listed in chapter 3 as a basis here.

4.3.1 Tax Breaks

If the tax level is too high one would expect this to be the case for all firms, not just foreign investors. The same goes for tax holidays; if these are good means for attracting foreigners to invest it may also increase domestic investments. Different tax rates can be advisable if there are positive externalities from foreign investors[46], but otherwise there should be equal rules to avoid distortions.

4.3.2 Relaxed Legislation

Restrictive labour laws can be tempting for the politician facing demands for more employment, but can easily achieve the opposite of the desired effect, when firms become afraid of over-employment in economic downturns. If such laws are a problem they should be abolished for all the country, except if there are differences between the normal industries and SEZ-industries that can justify two regulatory systems. Environmental legislation should seek to neutralise externalities[47, 48] – if the legislation is correct it will give the right prices, if not it should be corrected both inside and outside the zones.

4.3.3 Improved Infrastructure

Infrastructure is investment and should be evaluated the same way all investments should, choose those with highest internal rate of return (IRR) when there are projects competing for limited funds, or conduct all investments with positive net present value (NPV) when funding

[46] Say, for example through technology transfer and other advantages discussed in chapter 4.1.4. It would, however, be a huge task to analyse all these externalities for all businesses.
[47] This omits the difference between local externalities (e.g. poison in rivers) affecting the nation and thus internalised and those externalities affecting other countries (e.g. greenhouse gas emissions). However, if a nation is willing to inflict externalities on others countries in an SEZ, there is no obvious reason why it can not do so in its normal industries.
[48] See chapter 2.

is abundant. It could very well be the case that investments in the SEZs are the most profitable[49], but this ought to be tested against alternatives. A problem with the opposite case found in some zones, where businesses are required to build public infrastructure, is that otherwise profitable ventures might be deterred, to the mutual loss of both the potential host country and investor.

4.3.4 Reduction of Red Tape

Red tape, all those excessive bureaucratic procedures, can be a huge problem, but should no doubt be rectified in all parts of the economy. However, often there will be many who have a strong vested interest in the present system and will struggle any change that leads to loss of privileges. When this is the case, reformation in SEZs only *can* be a first step towards proper reform, but if possible this should be initiated universally.

4.3.5 Reduction of Duties and Customs Procedures

Maybe will it be beneficial to gather the import-export industries (figure 3.1) of a country in specific locations using this measure. Even though an open economy normally fares better than a closed alternative the infeasibility of a full opening may favour this type of partial opening, thus allowing for at least some trade.

4.3.6 Absence of Labour Union Activity

The features of labour unions show a wide variation over the world, and it is therefore meaningless to make a common characterisation of whether it is good or bad. What should be sought is to keep the good qualities and avoid what is negative, difficult as it may be. Here SEZs can play the role as test sites, where best practice approaches for both the unions, governments and firms can be researched – provided that it is easier to come to terms in a limited zone. Other than this I don't see how SEZs play any role that cannot be achieved in the entire economy.

[49] One possible channel is through increasing returns in infrastructure as explained in chapter 4.1.3.

4.3.7 Subsidised Land

This can be a nice incentive for attracting capital, but need not be confined to special economic zones. Regardless, the alternative cost (e.g. selling the land at a profit) should be considered.

4.3.8 Avoidance of Corruption

The same logic as under red tape applies – it would be better to remove it altogether, but as this can be unrealistic the SEZ approach can be a first step.

4.3.9 Clusters

Clusters can be established regardless of the presence of an SEZ. I do not see essentials that can only be achieved through an SEZ, nor do I see any major impediments, except the missing interaction with the outside zone, discussed under the Technology Transfer and Training-heading above.

4.3.10 Summary

Devereux & Chen (1995), p 711 argue that "it is hard to think of any distortion for which an export zone is the first-best targeted response". As can be seen above I do think there are potential cases, but this applies mostly in theory. The big drawback is the same reasoning that led to them being the better option in the first place; the same way that optimal reforms can be infeasible *so can* optimal SEZs. If subsidies[50] through an SEZ are based on somewhat hard-to-measure benefits for society as a whole, then the risk of regulatory capture and downright corruption would make it difficult to ensure proper bureaucracy in an economy not able to do reforms.

[50] Subsidies can also take the form of lower taxes than the rest of the economy.

4.4 Economic modelling of SEZs[51]

The available literature all focus on the countries' point of view and is listed as such in this chapter. This is only natural, since no zones will be set up without the approval of the host.

Hamada was the great pioneer in this literature with his 1974 article, "An economic analysis of the duty-free zone". Here he presents a two-factor, two-commodity Heckscher-Ohlin theoretical framework and some results. He finds that an exogenous movement of foreign capital into the SEZ has a negative welfare effect on the host. However, as Hamada states himself, factors that can contribute both positively (industrialisation, learning effects, unemployment) and negatively (social and political problems) are ignored.

In a note Rodriguez (1976) extends a certain part of Hamada's analysis. He finds that, under the assumption of full factor mobility between the SEZ and the rest of the host country, SEZs are perfect substitutes for free trade (as long as income can be spent where it is earned), and thus can give the same welfare level as free trade. Further, all trade will be done by the SEZ.

Hamilton and Svensson extend the original Hamada analysis in the 1982 "On the welfare effects on a 'duty-free zone'". They confirm the result that capital inflow diminish welfare, however, they differ from Hamada when they find that capital imported to the SEZ is even worse for the welfare of the host than if imported to the non-SEZ area. In their 1983 "On the choice between capital import and labor export" they make a clear distinction between the cases where capital is mobile and where it is sector-specific. They find that import of capital to the export sector (protected sector) increases (decreases) welfare, given sector-specific capital – while mobile capital decreases welfare. Thus, they find that an SEZ can be a substitute for capital import to the export sector of the economy, especially when this capital import is infeasible. Further, good tax policies can further increase the advantages of SEZs.

Miyagiwa (1986) extends the framework with an application of a Krueger multi-sector model and finds that establishment of an SEZ can lead to welfare increase – contrary to Hamada. This hinges on the relative factor intensity of a free-trade zone. The Krueger multi-sector

[51] Duty-free zone, export processing zone, export zone and free-trade zone are all terms used in this strain of literature.

model is based on both the Ricardo-Viner and the Heckscher-Ohlin models and was introduced by Krueger in the 1977 paper “Growth, Distortions, and Patterns of Trade among Many Countries”.

In his 1986 paper “International factor movements, repatriation and welfare” Wong elaborates on the problems addressed by Hamilton and Svensson (1983) and also explains why Hamada and Hamilton/Svensson reach different conclusions.

Young (1987) puts a special emphasis on distortions in his extension of the Hamada model. He introduces intermediate inputs in the equations and finds that distortions lead to lower national income and welfare if

> *(1) there is less substitutability between the intermediate and labor than between these factors and capital, (2) there is currently a small foreign-owned sector in which the share of labor in total costs is large relative to the share of the imported intermediate in the foreign sector and relative to the share of labor in total costs in the domestic zone.* (Young, 1987, p369)

Young and Miyagiwa (1987) are the first to introduce unemployment into the Hamada framework. Using a Harris-Todaro (see Harris and Todaro (1970)) type unemployment, they find positive effects for the welfare of the host country, given a reduction of tariffs on intermediate imports. This is important, as unemployment is one of the main quoted reasons for establishing EPZs in the first place. The analysis is later extended by Chaudhuri and Adhikari (1993). This note emphasises the risk of welfare loss, as they find that SEZs may increase unemployment.

Miyagiwa (1993) deals with the ideal locational choice of SEZs, comparing the lowering of unemployment when having an urban SEZ with the broadening of the economic base when having a rural SEZ. His finding is that mobile domestic capital warrants rural areas as the preferential choice, while the case of sector-specific capital it is inconclusive and can be either urban or rural.

In his 1996 “Unemployment Reduction in the Presence of a Rural Based Free Trade Zone: Some Policy Implications” Basu gets results differing from Miyagiwa (1993), now an

establishment of a rural SEZ means an increase in employment but a reduction in national income.

Beladi and Marjit (1992) find that foreign investment through an SEZ is beneficial for countries importing labour-intensive goods, while bad for those importing capital-intensive goods.

Tsui (1993) uses bargaining between the SEZ firm and the host government as an organising framework, finding that the distribution of gains depends on the relative bargaining strength. Also he finds that wage in the SEZ should be set equal to the national wage to avoid distortions, and discusses how optimal incentive packages depend heavily on the institutional constraints.

Din is the first one to model linkages in his 1994 "Export processing zones and backward linkages". Here a third sector is introduced, the intermediate good-producing sector, and welfare for the country is analysed both when this sector is trading internationally and not. A non-traded intermediate good means SEZ will raise welfare levels as long as the intermediate good is labour-intensive[52]. For capital-intensive intermediate goods this is the case given the assumption that the SEZ sector has a higher labour/intermediate good ratio than the non-SEZ sector using the same intermediate product[53]. However, if the intermediate good is traded, welfare is not influenced by the foreign investment associated with an SEZ.

The main contribution of Devereux and Chen (1995) is to split the effects of the SEZ into the volume of trade effect and the factor terms-of-trade effect. The factor terms-of-trade effect had hitherto been ignored[54] by most of the literature, but is found to be important as it is raising welfare. Another finding is that quantitative protection of the domestic sector improves welfare, regardless of the factor intensity of the protected sector.

Ge takes account of technological learning and adaptation in his 1999 "The Dynamics of Export-Processing Zones". The conclusion is that SEZs, implemented properly, can be an

[52] This raises the price for the intermediate product, thus raising wages and lowering returns to domestic capital. Wages are also affected positively by the increased demand for labour by the SEZ. The net welfare effect is positive for the country.
[53] Also here the positive effect of higher wages will exceed the negative effect of lowered returns to domestic capital.
[54] Due to the assumption of local factor price equalization.

effective means of achieving economic openness and growth. For maximum benefit it is important to strengthen linkages between the SEZ and the domestic zone (DZ) through policies. Also policies concerning the DZ needs implementing, the discrepancy between countries here is presented by the author as a possible reason why some countries succeed with their SEZ and some do not. In addition, Ge says that SEZs can lead to economic openness and liberalisation since they are trade enhancing ("a partial opening of the capital account").

Tetsu (2004) does a study on the locational choice of SEZs. A significant result is that "…attracting foreign firms which are more labor-intensive (capital-intensive) than the rural domestic firms into the rural-based EPZ is the best (worst) policy for developing countries."

Litwack and Qian take a different approach in their 1998 "Balanced or Unbalanced Development: Special Economic Zones as Catalysts for Transition". The underlying problem is the perceived risk of investors that the state will confiscate their gains through ex-post increased taxation or expropriation if they do well, and thus investments are cancelled. The fix is to constrain the state, also through ensuring enough revenues to make ex-post action unnecessary. Here SEZs are seen as a vehicle to do a gradual restructuring of the economy[55].

All in all many of the features of SEZs are introduced, but analysed individually conclusions leap in all directions. While I acknowledge that some of them are difficult to model, I hope most of the points in chapter 4.1 and 4.2 will eventually be part of a single model, as time goes by there could even be enough data to calibrate a quantitative version.

[55] It is assumed that a lack of resources makes the investments of a complete overhaul of the economy impossible.

5. The Firms' Point of View

Whereas the last section dealt with the point of view from the hosts' side – the supply side of the equation, this is all futile unless there is also a demand side. For there to be a demand to locate in special economic zones, conditions need to be attractive enough for firms to establish. I will write using foreign multinational, often large, enterprises as the typical firm, though most of the analysis should be relevant for domestic and/or smaller firms as well.

Some features that are positive for the host economy are equally negative for the firms, and vice versa. There are, however, also mutually beneficial things to be done, making it possible for SEZs to have a net-effect.

As an overlying model I will present the OLI-framework, devised by Dunning. Moreover, I will look at determinants for foreign direct investments in general, with additional comments relevant for special economic zones.

5.1 OLI – Ownership, Location, Internalisation

As told in Tolentino (2001) the foundation of the OLI-framework started with the 1976 Nobel symposium (published in Dunning (1977)), then evolving into an *eclectic paradigm* in the mid '80s. This theory comprises three factors: ownership advantages, locational advantages and internalisation advantages as the legs of a "three-legged stool". (Dunning, 1998) The idea is that these are the factors determining whether a business will be a success, according to Dunning all equally important. (Ibid.)

The ownership advantage has to do with the comparative advantages of the owners. E.g. some firms have an outstanding culture of innovation, while others are known as safe steady performers. Drawing an analogy to international economics they should then specialise, it will be hard for the innovator to fix any venture into a stable business, vice versa should the safe bet firm be reluctant to change its strategy into an early developer one, when resources to do so are not there.[56]

[56] Obviously all firms will have several capabilities, but this is not different from the fact that countries don't do full specialisation, say Germany only producing cars.

Locational advantages emerge for different reasons, Dunning (1992), pp56-61 lists 4 important ones. (1) It can be market seeking, say a foreign entrant establishing in a large lucrative market to get a share of the business. Another option (2) is that the first and foremost reason is to get hold of resources; this could be cheap factor inputs (capital or labour) or specific natural resources, energy, etc. found in particular locations. Larger firms will often try to seek efficiency (3) by splitting production, say, by adding labour intensive work in an area of cheap labour and transport to a place of cheap energy to add this, then ship it off to the final market for finalising and sale. An alternative to the firm doing this on its own is to split the production between companies, typically with one firm using components bought from others. A final locational advantage (4) is strategic asset seeking, e.g. by getting a foothold in a market that might become a supplier of brainpower.

Internalisation advantage is basically a question of make-or-buy. Some firms excel at the whole production chain and should exploit this. Even if better producers exist it can be better to do it yourself if fearing that suppliers will turn against you and start competing, this is also a question of establishment costs and levels of trust. Contrary, other firms are number one at only a small part of the production and should stick to this, pooling with others to make the complete product.

The OLI-framework is extremely wide and the three advantages will blend in a fine mesh, often undistinguishable from one another. E.g. internalisation advantages will be closely related to both ownership advantages and efficiency seeking. This, however, misses the point, which is to analyse the situation in a broad perspective.

5.1.1 Special Economic Zones in an OLI-framework

Ownership-advantages might be relevant for SEZs in some cases. Mostly those O-specific advantages are the same as with any FDI, but there can be special schemes to link companies in an SEZ setting. This could have been general means for all of the economy, but SEZs provide an advantage through lowering the information costs, since companies know which channel to use for linking up with partners.

Locational advantages are the alpha and omega of SEZs. Better infrastructure, externalities of a cluster, easy access to cost-effective labour, et cetera – these are all common features that attract business. Some are costs to the host country, but many should benefit both the host and the firm in the long-run, even after taking the alternative cost into account. This is true especially for cluster-effects, discussed in chapter 4.1.3.

As for internalisation advantages SEZs should help to expand the options. This is reasoned analogously to the ownership-advantages, but now it is more a question of increasing the number of suppliers and buyers in the vertical value chain.

The ownership- and internalisation-advantages is particularly relevant when joint venture is the form of entry. Joint venture, as the name more than implies, means that there is some form of cooperation between two or more firms. Then the cooperating should be able to draw on the capabilities of both parties, for example using the reputation of a large MNE when getting equity and using the local knowledge of the native firm to navigate the bureaucracy. A good example of a success is Sony Ericsson mobile phones, using Ericsson expertise in telecom technology and Sony for music and other entertainment. When this joint venture also utilise the right location(s) it is a good example of how the OLI-factors are important.

5.2 Determinants for FDI

In "Getting Institutions Right" Rodrik strongly argues that institutional quality[57] holds the key to understand how some countries prosper and some do not. I quote:

> *Rich countries are those where investors feel secure about their property rights, the rule of law prevails, private incentives are aligned with social objectives, monetary and fiscal policies are grounded in solid macroeconomic institutions, idiosyncratic risks are appropriately mediated through social insurance, and citizens have recourse to civil liberties and political representation.* (Rodrik, 2004, p1)

As we see a special emphasis is put on investors, in a world of imperfect information the abovementioned effects will be even stronger on foreign investors, as they do not know how to navigate in a foreign economy that does not fit the description. It is found that even though there is also a reverse causality of prosperity giving good institutions, "institutions exert a very strong determining effect on aggregate incomes". (Ibid.)

Balasubramanyam (2001) (an OECD paper) list the following factors as foreign direct investments determinants: (1) The GDP/capita size of the domestic market and growth of this is important, simply a means of expanding the sales base with the investment. (2) Resource endowments (both natural and human), human will be measured as cost per unit of output, natural resources are more important the higher the transportation costs and the less available. (3) Infrastructure and communication networks, including a favourable work and leisure environment. Without proper infrastructure there simply cannot be proper trade with the products and services. (4) Macroeconomic stability, as mentioned above. (5) Political stability, also implied by Rodrik (above). (6) A stable and transparent policy framework for FDI is probably underrated by most people, but is counting a great deal in investments. Firms shun risk and are willing to pay to avoid it, for example by investing in a less attractive location with lesser perceived risk. (7) A distortion free economic and business climate comes at a premium, says the author. I'm assuming this is when the distortions actually harm them (say, by increasing the costs of inputs or reducing the size of the market) or when distortions increase the perceived risk mentioned in (6). (8) Tax concessions attract FDI, as long as the economic environment is stable. This hinges on the firms actually trusting in it and believing

[57] A rather narrow meaning of "institutions" is used in this strain of literature. What is meant is to a large extent the formalised institutions through written law and state agencies, not the social fabric of informal alternatives, such as e.g. tribal communities.

the government will not take "revenge" by confiscating the profits ex-post. (9) Membership of trade unions will also be beneficial, expanding the market as (1).

In "Foreign Direct Investment: Good Cholesterol?" (which is really more of a debt vs. FDI-comparison) Hausmann and Fernández-Arias make a similar praise of macroeconomic stability and institutions with the quote: "It [FDI] flows in because it is attracted by the long-term prospects of a country and the confidence that its policies and institutions inspire." (Hausmann and Fernández-Arias, 2000, p3). On the other hand, they do not find evidence of market size being a significant variable

The fact that labour-intensive industries establish in low-cost countries to take advantage of lower wages and industries with special inputs often establish where these inputs are to be found is apparent to everyone. That the attractiveness of a country can be improved by special incentives should neither be a secret. But, the fact that industries differentiate between countries to a large extent based on governance and other risk-factors remains elusive to many. This is also the major true welfare-increasing means of attracting FDI – special incentives are to a large extent beggar-thy-neighbour tactics[58] and higher wages and better terms of trade for other resources is what FDI is supposed to give in the first place, meaning it should only be used to lure investors in the short-term. Even if FDI through improvement in institutions crowds out some investments in less stable countries the cake does get bigger as distortions are weeded out. So, this is one of the common grounds for firms and hosts, where there is all to win on cooperation and sensible policies.

5.2.1 Actions to Achieve the Determinants

OECD (2003) has made the following list of actions as "Guiding Principles for Policies toward Attracting Foreign Direct Investment" in "Checklist for Foreign Direct Investment Incentive Policies".

The most effective action by host country authorities to meet investors' expectations is:

- *Safeguarding public sector transparency, including an impartial system of courts and law enforcement.*

[58] Some of them are improving efficiency, say, by lowering excessive tax rates, but many are also increasing the level of distortions in the economy.

- *Ensuring that rules and their implementation rest on the principle of non-discrimination between foreign and domestic enterprises and are in accordance with international law.*
- *Providing the right of free transfers related to an investment and protecting against arbitrary expropriation.*
- *Putting in place adequate frameworks for a healthy competitive environment in the domestic business sector.*
- *Removing obstacles to international trade.*
- *Redress those aspects of the tax system that constitute barriers to FDI.*
- *Ensuring that public spending is adequate and relevant.*

(OECD, 2003, pp7-8)

As can be seen advices are straightforward, having much more to do with economic sensibility than special schemes, consistent with the findings above. This will be further treated in chapter 7.

6. India

6.1 Facts about India

(Draws on the CIA World Factbook, www.cia.gov)

This first general part describing India (chapter 6.1 – 6.3) is meant as an introductory chapter for those not familiar with the country. It can be skipped altogether by more experienced readers.

India is the world's second most populous country, located in and occupying the greater part of the Indian Subcontinent, often referred to as South Asia. Civilisation here dates back at least 5000 years, though today's India was established when gaining independence from the British Empire in 1947. The population stands at over 1.1 billion, with an annual growth rate of 1.6 %. Total land area is just below 3 million km^2, meaning that population density is high. Among the 14 official languages Hindi is the most widely spoken, and also understood by many more, however, English is the most important language in national, political and commercial communication. Hindu is the dominant religion with 80% adherents, though many smaller areas are Muslim and some Buddhist, Christian and Sikh. Though a large producer of graduates, the educational system in India is not as well as often perceived in the western world. The literacy rate is at 61% (76.4% for the 15-24 age bracket), only 90% attend primary school and 12% of the relevant age do tertiary education. (UNESCO Institute for Statistics, www.uis.unesco.org) These numbers are misleading, though, much of the education is of dismal quality, e.g. has teacher absence been measured at 25%, with an additional half of those at work not actually teaching. (Kremer et al., 2005) Moreover; as many as 75 % of the graduates in tertiary education are deemed not employable by multinational corporations. (Muralidharan, unknown year) On the positive side, the command of English make educated Indians more versatile than in many other developing countries.

India is a federal state with 28 states and an additional 7 union territories. The capital is New Delhi (part of Delhi), while Mumbai (former: Bombay) is the commercial "capital". Other major cities are Kolkata (former: Calcutta), Chennai (former: Madras), Bengaluru (former: Bangalore) and Hyderabad. Though only making up 19.9% of GDP, agriculture employs 60% of the labour force, industry has a 19.3% share of GDP and 12% of labour force and services

make up 60.7% of GDP, while employing 28%. This must be seen in connection with the large extent of subsistence agriculture, also meaning that a large part of the population lives in rural areas. The main industries are textiles, chemicals, food processing, steel, transportation equipment, cement, mining, petroleum, machinery and software.

Infrastructure in India is considered bad compared to economies at the same stage, especially China. The train network is extensive, but should have been upgraded. There's a dire lack of highways, though efforts are made to build a network connecting the major cities. Perhaps the worst bottleneck is to be found in cities, both in terms of internal transportation and port facilities, terminals and such nodes. Airports are scattered in 341 locations, though only the major cities offer many flights. Quality has been dismal, but upgrades are being made. Telecommunication has been getting much better lately. Though the number of fixed lines is low, mobile phones are spreading at breakneck speed. Fast Internet is available in most urban areas. Power is a perpetual problem, both because of a production deficit and due to a poor grid, leading to occasional blackouts (especially in rural areas). This can be attributed to underinvestment over a long period of time in the sector. (Patnaik, 2000)

6.2 Public Institutions in India

(From Kapur and Mehta (2005))

India is ruled by a parliament that is the legislative body on the federal level. The executive power is vested in the Council of Ministers, led by the Prime Minister, while the president has a ceremonial role. Further, there is a judicial branch, where most issues are settled on state level, while the federal Supreme Court handles interstate affairs and some matters of public importance. The most important audit functions lies with the Comptroller and Auditor General (CAG). The central bank is called Reserve Bank of India (RBI). It is not very independent; the main tasks are monetary policy and regulatory functions controlling ownership. The Finance Commission, constitutionally mandated, has great influence over issues of taxation and revenue sharing between central government and state. The most influential of the many non-statutory institutions is the Pay Commission, advising on wage policies. The others are seldom influential. Finally, two recent regulatory additions are the Telecommunications Regulatory Authority of India (TRAI) and the Securities and Exchange Board of India (SEBI). These were established as part of the liberalisation in, respectively, 1997 and 1988.

Atypically for most former colonies India established as a democracy and has remained so since. In spite of this it is by no means considered a safe haven politically[59]; recent wars with neighbouring countries, nuclear ambitions and insurgencies in Kashmir, the north-eastern part and occasionally in some other areas are the main risks. The legal system and code of laws are based on those of the UK, in many instances a carbon copy. This gives a far better judicial framework than most competing least developed countries. However, a major problem is a congested court-system, leading to a very long processing time of lawsuits, which is detrimental to investors.[60] The legal system of India can thus be seen as both an asset and a drawback

The prevalence of corruption in India has historically been high[61] and has remained so, some say due to a lack of interest by the government. Transparency International now ranks them as

[59] Dictatorships can be more stable than democracies, but generally democracies outperform non-democratic countries in the long run.
[60] See "The long arms of the law", *The Economist*
[61] Wadhva (2000), p208 describes corruption as "rampant", and that it "added to delays and to the harassment of citizens and investors alike".

the 70th most corrupt out of 163 countries. (Transparency International, www.transparency.org) The licensing regime (often known as the permit-license raj) facilitated this, as corruption prone decisions are left to the discretion of bureaucrats and politicians. Now there is a worry of the permit-license raj being replaced by an inspector raj, when licensing is phased out. (Kumar, 2003, pp40-41)

6.3 Economic History of Present-Day India

(This section draws on Krueger (1975); Mohan (1993); Kundra (2000); Raman and Diwan (2002) and Bjorvatn et al. (2006))

After a century under British rule India gained independency in 1947, as one of the poorest countries in the world. Bhagwati and Desai (1970) and Bagshi (1972) describe how economic growth had been virtually non-existing for the past 50 years and the relative degree of industrialisation in strong decline. Shortly after independence India started to become very economically isolated, relying on import substitution[62] schemes with anti-export policies. This was a result of deep distrust of trade as a means to promote growth, seeing how the exploitative trade system under colonial rule had been detrimental to the Indian economy. Further, many believed India with its vast size could be self-sufficient, on raw materials as well as technology. Moreover, at this time Soviet was still seen as an example of how a command economy could be successful and India pursued several policies of state planning, like the communist countries with an emphasis on heavy industries. Many of the industries were state run, and the others were often under heavy bureaucracy requiring an industrial licence from the government. The beginning rationale for these controls was (1) to curtail the large industrial houses from achieving monopolies or otherwise too large volumes and (2) to allocate scarce resources – but this soon turned into ever more controls[63] with frequent changes in rules and regulations. Other distortions effective were import licensing and price controls, while there were a few incentives for export. Additional significant factors holding back the economic development are the states of emergency during and after three wars with China and Pakistan.

In the 1970s we see a faint beginning of liberalisation through reductions of non-tariff and quantitative restrictions on imports and enhanced incentives for exports, while in the early 1980s there are attempts to reduce the licensing and regulations. In the late 1980s several export promotion schemes are introduced while finally in the early 1990s the “structural adjustment programme” is introduced to bring serious liberalisation. Most observers see this as a consequence of the economic hardship following the external payment crisis of India

[62] Krueger (1975) does a thorough analysis of the import substitution regime in India until 1975.
[63] See the appendix, chapter 9.1 for an example of some of the red tape and a description of the interests involved.

in1991[64] – facilitated by the necessary political conditions, where the political party Congress (INC) stayed in power and could take the reforms all the way through. (Acharya, 2006, pp11-12) The programme aims to reduce regulations and controls drastically, reduce the excessive level of bureaucracy and introduce market mechanisms to a much larger extent. Specific features are to involve the state governments in export promotion; reduce the tariffs on imports of capital goods; reduce the number of industries requiring industrial licences and reduction of tariffs. Scholars differ somewhat on the extent of reforms, but generally agree measures are substantial[65] (see Acharya (2006) and Ahluwalia (2002) for two different views).

In 1993/94 capital inflows expanded, leading to a build-up of foreign reserves, as India chose to keep the nominal exchange rate at ease. This was done to support exports, which grew by an annual 20 % for 3 years, to curb imports at an (allegedly) vulnerable point of liberalisation and also because larger foreign reserves were desirable at the time. As could be expected, it was paid for by an upswing in inflation. In 1998 the need for funds to modernise infrastructure was put at US $215 billion until 2005-6 by an expert group, acknowledging the need for foreign direct investments. (Mohan, 1998)

6.3.1 The Current Situation

Even though there have been substantial improvements, India is still performing badly in terms of conditions for doing business, and there are complaints that reforms must be speeded. (”India’s Economy”, The Economist) According to a recent World Bank Survey India ranks 134th out of 175 countries in “ease of doing business”. (www.doingbusiness.org) Licensing is still a problem for entrepreneurs, both in terms of costs and the time it takes to set up industry, the time for setting up a warehouse is twice that of an average OECD country and the cost (as a percentage of average income) is more than eight times that of OECD. (Ibid.) India scores well on the “Protecting Investors” variable as a result of the sophisticated legal system, but the poor results in enforcement of contracts indicate the aforementioned problems of court system blockage. The third significant low scoring variable (#158) is the tax burden, both because of a high tax rate (81.1% of profit vs. OECD: 47.8 %) and a large

[64] The 1991-crisis was caused by the unsustainable Indian macroeconomic policies of the 1980s, triggered by the external shock with the Iraqi invasion of Kuwait. A synopsis of this is given in the Introduction chapter in National Council of Applied Economic Research (2001).
[65] Peak customs tariffs were indeed reduced from 200% in 1991 to 40% in 2000. (Acharya, 2006, p6)

number of procedure and the time involved. However, this is still far better than the veritable mess of the mid-1970s, described in Acharya (2006), “Thirty Years of Tax Reform in India”. Recently there have been reforms in corporate, income and wealth taxes simplifying them a great deal, and also to some extent reductions. Most changes have moved in a singular, predictable, direction, but in the last decennium some of the reforms were reversed and replaced by alternative policies. Maybe even more important, tax administration has seen great improvements; IT is being utilised, audit systems built up, et cetera.

6.3.2 The Next Step

Further reforms are still en route, as described above. There seems to be consensus about this among the political parties, but in power this does not have to lead to actual action, especially when it comes to unpopular measures that will harm special interest groups. Another development is that state governments have started with their own visions and reforms. This is likely to expand, especially since the gradual trials of some states turn into successes that others are eager to copy. One example of this is how other states try to make their cities the next Bangalore in ICT, for better or worse. (Wadhva, 2000, p215)

Some of the improvements that need to be done in the near future is to clean up all the exemptions in the tariff system, rates need to be standardised more, the central tax system and state tax systems need to be harmonised and, finally, more people should be included in the formal economy[66], thus expanding the tax base. Moreover, as Wadhva (2000), emphasise, there is need for more reforms in the industrial sector, especially labour market reform. This is also reflected by India scoring 112th in the aforementioned World Bank survey.

[66] Kumar, 1999, using a fiscal approach, estimates the black economy of India to 40% of GDP.

6.4 History and Situation of EPZs and SEZs in India

(This section draws on Raman and Diwan (2002) and Mistry et al. (2006))

In 1965 the Kandla Free Trade Zone (KAFTZ) in Gujarat is established and becomes operational in 1966-67. This was done mainly as a means of promoting the backward Kutch region. (KPMG, 2002) Santa Cruz Electronics Export Processing Zone (SEEPZ) near Mumbai follows in 1974, originally meant to deal with the electronics sector only, in 1986 extended to gems and jewellery as well. 1980 sees the introduction of a scheme for Export Oriented Units (EOU)[67], though until 1988 only 110 units (i.e. firms) were started. In 1986 four more EPZs are added, in Madras (now Chennai), Noida (close to Delhi), Falta (near Kolkata) and Cochin (in Kerala). A seventh zone approved in Vishakhapatnam in 1989 became operational in 1994. This coincides with a gradual liberalisation of regulations for EPZs and EOUs, with more availability of sales in the domestic trade area (DTA), allowing subcontracting to the DTA, tax holidays for EOUs and simplification of various procedures.

With liberalisation in 1991 and onwards the rules of the game changed significantly for EPZs. Partial decentralisation was achieved by establishing an automatic approval route for some investments, though mostly relevant for small-scale ventures. Now the approval can be awarded locally for EPZ units, by the Development Commissioner in the EPZ and by the Secretariat of Industrial Approvals for EOUs. Duties were reduced for sales in the domestic trade area, maximum depreciation increased and regulations rationalised. Further, agricultural, horticultural and aquacultural industries can now participate in EPZs and EOUs.

In 1994 state governments as well as private enterprise were allowed to participate in zones. The exim (export-import) policy of 2000, section 9-A, introduced the conversion of four EPZs to special economic zones, with the following key incentives:

- *Fiscal Incentives:*
    - *100% income tax exemption for a period of 5 years, 50% exemption for 2 years*
    - *Exemption from service tax*
    - *Supplies to SEZ to be considered as exports*
    - *Exemption from Central Excise Duty on procurement of capital goods*

[67] EOU is meant as a means to promote exports for firms outside the zones and must be seen in the context of the cumbersome trade policies India used to have and to some extent still has.

- *Non-fiscal incentives:*
    - *Exemption from industrial licensing for SSIs*
    - *100% FDI through automatic route to manufacturing SEZ routes*
    - *Technological Infrastructure (dark fiber network, e-mail, voice mail etc.)*

(Mistry et al. (2006), p10)

KPMG lists the following as the salient features of the policy:

- *Special Economic Zone (SEZ) would be a specifically delineated duty free enclave and shall be deemed to be foreign territory for the purposes of trade operations and duties and tariffs.*
- *Goods going into the SEZ area from DTA shall be treated as deemed exports and goods coming from the SEZ area into DTA shall be treated as if the goods are being imported.*
- *SEZ units can be set up for manufacture of goods and rendering of services, production, processing, assembling, trading, repair, remaking, reconditioning, re-engineering including making of gold/ silver/platinum jewellery and articles thereof or in connection therewith.*
- *SEZs may be set up in the public, private or joint sector or by State Governments*
- *SEZ should have an area preferably of 1000 hectares*
- *SEZ units would have to be positive Net Foreign Exchange Earners and would not be subject to any minimum value addition norms or export obligations*
- *100% FDI would be permitted for all investments in SEZs except for activities under the negative list*
- *The Ministry of Commerce and Industry through issue of a notification can also convert the existing Export Processing Zones (EPZs) into SEZ*

(KPMG (2002), chapter 5.1)

In 2003 the other four existing EPZs were also converted and named special economic zones, making SEZ the default option. The "SEZ Act of 2005" became effective 10th of February, 2006, formalising the framework a great deal.

Lately there has been a surge in proposed and approved zones, in spite of widespread protests from farmers and landowners fearing expropriation, but also many of the general public. Only

in the last two years 111 SEZs have been approved. (“India economic zones get go-ahead” news.bbc.co.uk) A new feature is that the industrial conglomerates of India are entering the game, building or wanting to build their own zones. So far this is true for Tata and Reliance, two of the largest.

An observation is that the regional policy argument, which led to the establishment of the first zone, is now completely overshadowed by arguments of general promotion of growth through exports.

6.4.1 Cochin Compared to Other Zones

Upon my visit in one of the zones, Cochin Special Economic Zone (CSEZ), what surprised me the most was the very modest size. As can be seen in the table it is the smallest of the Indian ones, but even the biggest is only 10 times as big, compared to the vast sizes of Chinese zones.

Table 6.1 Sizes of the Indian Zones, compared to Chinese Zones

SEZ	Size
SEEPZ	0.171 square miles
Kandla	1.2 square miles
Cochin	0.161 square miles
Madras	0.406 square miles
Vishakhapatnam	0.578 square miles
Noida EPZ	0.5 square miles
Surat	0.421 square miles

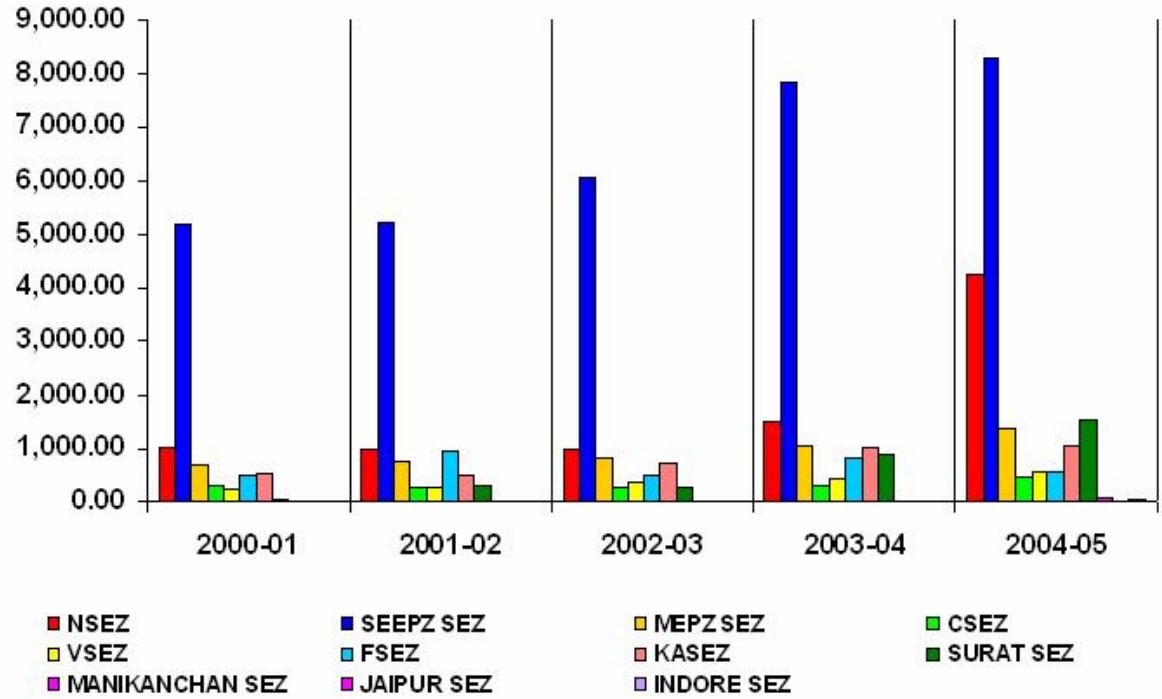
SEZ	Size
Shenzhen	126 square miles
Zhuhai	47 square miles
Shantou	90 square miles
Xiamen	51 square miles
Hainan	13127 square miles

(Source: Mistry et al. (2006), pp16-17)

As can be seen on the next graph CSEZ is indeed among the smaller zones in terms of output as well. But, The Santa Cruz Electronics Special Economic Zone (SEEPZ SEZ) is hardly any bigger and has still accounted for the bulk of total exports. And the runner up seems to be Noida, nor the biggest. A credible explanation for this is that the bustling metropolises of Mumbai (Santa Cruz) and Delhi (Noida) draw all the investments, leaving the (comparatively) remote city of Cochin fallow. This, however, does not fit the data supplied in table 6.2. The double investment figure drawn by Noida in the preceding period multiplied

into many times as much increase in investment, and Santa Cruz hardly got any more investments than Cochin. Some of the explanation must be the composition of exports. As can be seen in table 6.3, gems and jewellery are the main articles in Santa Cruz and Noida, inflating the export numbers since they are high value items. But, probably also important is the uneven development in India – even if infrastructure gets clogged in Mumbai it is in far better shape than elsewhere and at least parts of Delhi enjoys wide lanes, a metro and other amenities on an almost western scale.

Graph 6.1 Exports of the Indian Zones



(Source: Nair and Singh (2006), p19) (Indian rupees x 10 000 000)

Table 6.2 Zone-wise Investment and Employment

SEZ	Average investment (US million $) (first five years of establishment)	Average investment (US million $) (1998-2003)	Average employment Number (first five years of establishment)	Average employment Number (1998-2003)
KANDLA	n.a.	23.8	244	10720
SANTACRUZ	n.a.	63.6	1190	36385
CHENNAI	6.8	34.6	2162	12374
NOIDA	7.9	121.6	2600	17502

COCHIN	0.2	58.6	1050	4962
FALTA	1.4	45.4	80	2597
VIZAG	neg.	60.1	neg	3035
SURAT		1.4		373

(Source: Nair and Singh (2006), p20)

Table 6.3 Zone-wise Exports of Major Items

Zone	Items Exported
SEEPZ SEZ	Gem & Jewellery (57.3%), electronics hardware (16.7%), electronics software (15.4%) and trading (10.6%)
NOIDA SEZ	Gem & Jewellery (51.3%), electronics software (11.7%), engineering goods (10.9%), electronic hardware (6.3%), textiles and garments (3.9%) and plastics & rubber goods (2.1%)
KOCHI SEZ	Electronics hardware (28.3%), Food & agro products (22.3%), Plastic and rubber goods (10.3%), engineering goods (8.3%), gem & jewellery (6.2%), textile & garments (5.9%) and electronics software (3.4%)

(Source: Nair and Singh (2006), p22)

Apart from the observation I made of the Cochin SEZ being small, it also seemed to be much diversified, as can be seen in table 6.3 above. This does not bid very well for cluster effects, though I could neither way have observed these with only a brief visit.

6.4.2 Has Advantages been Achieved?

This relates to the advantages discussed in chapter 4.1.

As can be seen from table 9.2 in the appendix (chapter 9.8), some investment has come from abroad, though a small part relative to domestic. Net effects are difficult to measure, in theory both none and all of the domestic investments could be invested abroad without the zones and all foreign investment is crowded out investment that would have come to India either way. I'm guessing the domestic part going abroad would be closer to none, given how closed India's economy used to be. I do, however, believe some of it would otherwise have been consumed. The prospects of India seeing any of the foreign investments in the former economic climate without the zones would be small, though. Either way it is small numbers.

Employment was estimated to ca 80 000 by KPMG (2002), with the SEEPZ providing nearly half of that sum. Similar numbers are shown in table 9.1 in the appendix. This must be

considered a minimal fraction of a country inhabited by more than one billion people and is thus not an advantage that has reached its potential.

As for the cluster, technology transfer and training part it is difficult to say to what exact extent this is achieved. I do know there is more potential, though, since surrounding companies do not often take part in the value chain. Kundra (2000) gives an account on how subcontracting is subject to complex permission procedures and difficult formalities. The small size and diversified composition of the zones render significant cluster effects hard to obtain.

Although next to impossible to analyse what would have been the case without zones, I believe SEZs in India have some merit as partial policy reform and laboratories. This I support by the fact that policies for zones keep changing, and most changes seem to be for the better. Nevertheless, also here there should be more room for benefit.

In regional policy through SEZs, the foremost exponent of this in India is the zone in Kandla. Since it opened in 1965 it has increased steadily to a total number of ca 10 000 people employed, export-wise it is among the smaller zones. Whether or not it should be considered a success depends on the weight one places on redistribution. One sign that India is not satisfied is that most zones after has been placed close to cities, though this must be seen in connection with the infrastructure discussed in 6.4.1. What also seems to be the case in India is that the regional policy argument goes the other way around; many are afraid that the introduction of special economic zones will lead to less employment as it needs space that would normally otherwise be used for labour-intensive agricultural activities. This is a big issue in India now, but is not that relevant to this thesis.

6.4.3 Are the Costs Present?

This relates to the costs discussed in chapter 4.2. The alternative cost from 4.3 is presented in a condensed form.

Talking to one of the officials in the Cochin SEZ I did not get the feeling they feared the footlooseness of multinational enterprises. This aligns with my opinion that this argument has

been taking too much attention, but could also part be because India is a huge country, thus naturally diversified.[68]

Foregone tax revenues due to tax breaks is, next to fear for less agricultural land mentioned above, the main concern in India now. India has had a boom of foreign investment lately, but telling to which extent this is because of SEZs is hard. Probably some revenue is lost, estimating the amount needs further study.

If inequality is a problem with Indian SEZs it is (1) through investment going to already developed areas near the major cities and (2) through some people losing their job in farming as mentioned under chapter 6.4.2.

Environmental issues in India do not seem to be a worse problem in zones than outside – rather the opposite. Nor has relaxed environmental legislation been an incentive in zone policy.

Too much is happening right now with Indian SEZ policy to analyse the alternative costs to the full extent. The endemic red tape is being partly removed in the general economy, alongside the SEZs. The tax burden is probably too high (see chapter 6.3.1) elsewhere or low in SEZs since so much of SEZ-policy is based on fiscal incentives (see chapter 6.4). Many worry that land is handed out by the government to freely, this could have been sold for profit. In general I will say that policy makers in India, which is so often the case with policy makers, fail to make alternative cost considerations explicit or even worse; to consider them at all. Such analysis would greatly improve decision making around the world, though a trade-off with increased information gathering must be made.

[68] Though, for regions a single business can still play a big role.

7. Advice

The consensus in India seems to be that the country is now on the right track[69] and has just about started is ascension to richness – there is even a claim by the current president that India can become a developed country by 2020[70] (Kalam and Rajan, 1998). The current economic growth, combined with a huge population will surely make India a very important player, but there is still a long way before the population can enjoy anything like the living standards of western countries and some of their East Asian and Southeast Asian neighbours. To put it in perspective: A CII-McKinsey study project, "Made in India", projects the manufactured export growth to 650% over the next 10 years, given a set of assumptions. Impressive, were it not for the fact of the small base, Indian (total) exports are actually lower than those of Norway. (CIA World Factbook)

Many Indians, academics and general population, question the solutions "offered" by such organisations as the World Bank and IMF. But, they give few alternatives in terms of permanently escaping what used to be called the "Hindu rate of growth", meaning the average of 3.5 % economic growth from 1950-1980. I will, however, fully agree on one important objection raised – India is not the same as the rest of the world, and the same medicine that was used in today's developed countries might not work. This is still a bad argument *against* following those same examples, but a good argument for doing thorough analysis on what will work.

I will start by going through one policy suggestion and one means of achieving it that are not much mentioned in the general literature, namely (1) laboratories and (2) diaspora. The first is treated in chapter 4.1.6 and mentioned in chapter 6.4.2; the second is seen here as a tool to increase investment directly (chapter 4.1.1) and as a specific means to increase technology transfer (chapter 4.1.4). Then (3) will I present more special economic zone advice related to advantages that can be achieved and (4) presenting the same with focus on avoiding the costs. After this (5) some general economic policy recommendations are made. Finally, I give some concluding words on the future of India.

[69] See for example http://planningcommission.nic.in for the thoughts of the recent government led Tenth Five Year Plan and the upcoming Eleventh, and Acharya (2006), p217 for a summary of how some scholars are very bullish about further reforms and productivity growth.
[70] This must be seen in connection with his role as president, encouraging the Indian people.

7.1 Laboratories

As explained in chapter 4.1.6.1, China employed their SEZs in the transformation towards a market-driven economy, testing what would work and what not. This was part possible because China is an authoritarian state, but also due to non-authoritarian policies that can be tried out in democratic India as well. The sheer size and federal structure (variation) already present in India[71] could be harnessed, trying out different policy sets in different economic climates. An example of how this could work in practice is to set up neighbouring zones, outside a city in a state, with different forms of subsidies; one with emphasis on less red tape, one with cheap land, one with a tax-holiday, different levels of infrastructure investments[72], et cetera. Likewise the same means could be tested in the countryside of the same state, perhaps giving different results. This tried out in several states at once should rather quickly give results on which zones are popular with firms, which are profitable for India, and so on – provided that data is gathered and compared in a meaningful way. A flip side of the approach is that it would demand a large number of zones, but this seems to be the case in India either way (see chapter 6.4). Another point contra is that it could prove expensive, but if concentrating on cost-effective measures that are expected to give a positive net present value, the risk should be bearable.

[71] E.g. the difference between communist-run Kerala with frequent general strikes and rather business friendly Gujarat, though lagging far behind Kerala in education. Because of the large regional differences results will be opaque if this is not controlled for.
[72] Finding the level of optimal investment would be a real feather, though an expensive test.

7.2 Diaspora

India has a large diaspora, people of Indian origin living abroad. Most of these are known as non-residential Indians (NRIs) and are spread mostly in Western Europe, North America, Southeast Asia, Africa and the Middle East. India has already adopted some policies to involve them in the economy, which I believe will be a good thing. However, to speed up these processes I refer to the main flaw mentioned in Gangopadhyay (2005). There he describes how policies have changed towards the better in recent years, but as he writes (p114) "in the public imagination […], the NRIs are considered to be the repository of the much-needed private foreign capital." In my opinion this is off the track. Sure, capital is important for India, but an even more fruitful approach would be to take advantage of their "technological, scientific, managerial and other skills" as Parekh (1993), p10 lists up. These are real assets that could help India more in the long run.

Linking it to special economic zones: in addition to Indians living abroad investing capital and bringing knowledge on how to set up zones and what are the key features sought after by companies, they can also play a role in easing the transfers of technology (see chapter 4.1.4.) – having knowledge on the Indian as well as other contexts should lower the barrier of information.[73] Since they can hardly be expected to automatically give technology and knowledge away without compensation, conditions must be so that this is of mutual benefit, the prime example being when local companies are subcontracting and productivity increases gain both parts.

[73] In my experience there really is a difference. Not so much with the educated classes, but these still make up a small proportion of the populace.

7.3 Special Economic Zone Advice related to Chapter 4.1

As described in chapter 6.4 Indian special economic zones are not ideal. Nor should anyone expect to find optimal cases in the field of economics, but effort should be put to improve where the slack is. The following are my recommendations to achieve the advantages of SEZs, using the classifications of benefits of chapter 4.1, minus 4.1.6 laboratories which had some special attention of its own through heading 7.1 above.

7.3.1 Foreign Direct Investments

As seen in table 9.2 in the appendix and discussed in 6.4.2 not too much of the investments in Indian SEZs are from abroad. This is by and large OK if investments are flowing sufficiently into other parts of the economy, but this has only started becoming the case lately. Before this India was a very much closed economy and this probably still sticks. As for now India should probably continue reforms of the economy, while avoiding the problems presented in chapter 5. Since the recent investment has received great attention worldwide, India should be well known with potential investors. This means she does not suffer the same problem many countries do of simply getting attention from investors. Still, some advertising might be useful.

7.3.2 Employment

Employment in the zones, as shown in chapter 6.4.2 is close to negligible. This will expand with the increasing number of zones, but will still be dwarfed by the Chinese SEZs for years to come. India has a favourable demographic dividend, a young population combined with falling fertility. Thus there will be a large supply of available workforce in the coming years, making it paramount to also make sure there will be an increased demand for labour. To facilitate this India may have to do some easing of labour laws, as they are considered rigid by world standards (see e.g. Acharya (2006), p210, describing employment as an effective *fixed cost* of production). This could be started in the zones, preceding the general economy. There are clearly some that will lose with changes in policies; the challenge is to find those policies with the right balance in the trade-off between protecting the interests of the employed and

unemployed[74]. Even if very much bias is put on the employed I believe the current system is lopsided and should be rectified in favour of unemployed by easing restrictions.

7.3.3 Clusters and Increasing Returns in Infrastructure

Cluster effects as per now in Indian SEZs are curtailed in an unhealthy way. (Kundra, 2000, p130) Even without opening up between the zones and the outside economy, simple adjustments such as increases in the size of the zones and more specialisation within each one could give substantial benefits. If also allowing for more interaction between SEZs and the neighbourhood, i.e. decreasing the strength of the border, even more could be attained. This, however, opens some difficulties if India wants to keep the zones and general economy separated. Regardless, some measures can be taken; in my opinion cluster effects should even be promoted. One way to explore this option is through more decentralised decision making for the zones, as recommended in KPMG (2002) and Kundra (2000) – this should lead to greater attention of which potential clusters can be developed. Another is through the CII-McKinsey (2005) suggestion that SEZs in India should be allowed to sell its products to the general economy when paying the relevant duties and sales tax. This could strengthen linkages through customer feedback and initiative. General advice on cluster promotion can be found in Altenburg and Meyer-Stamer (1999), chapters 5 and 6.

7.3.4 Technology Transfer and Training

To which extent technology transfers are taking place is impossible to measure without data, by nature hard to obtain in this field. Given the low level of cluster effects I reckon there is a substantial potential here as well, and this is an effect of particular importance. How technology transfer should be promoted is highly situational and I don't have scope to cover this in detail. One important note I will give is to pay attention to the low-tech effects (such as learning-by-doing), explained in chapter 4.1.4. Too often economies fight to become the most hi-tech, ignoring simpler and more cost effective measures. India can not have only engineers[75], but needs to put effort into improving the skills of the uneducated. SEZs can prove useful in this respect, by introducing some training to their workforce. This can be particularly successful if the diaspora is utilised in a cluster-setting, as explained above.

[74] Generally policies can be on the scale from ultra-liberal laissez-faire with no regulations, to completely state-run where all decisions need approval. In addition there are other possible characteristics, such as the Nordic *flexicurity* model

[75] Nor can any other country, of course.

7.3.5 SEZ as an Instrument of Partial Policy Reform

SEZs probably filled this purpose more in their early Indian history. Now, as the regime is liberalising, this has become less important, but there are still some ways to utilise this advantage. From my experience with and what I've heard of the Indian bureaucracy this is often sub-standard. Even though bureaucracy is not a policy per se, reforms to improve it are, and they are important. Since the administration of an SEZ is to a large extent service towards investing companies, this is a great way to introduce more customer-friendly bureaucracy. Although both better than the Indian average my two experiences with the bureaucracy of SEZs were divided into one good experience (getting access on short notice) and one "had me waiting a long time, did not give me better contact details, promised to get back to me, never did". If difficult to change the overall Indian bureaucracy (I suppose it is), some partial reforms in SEZs can be a good second best.

7.3.6 Regional Policy

As mentioned in chapter 4.1.7 SEZ can be a means of regional policy – but this can harm the prospect of other benefits, necessitating thorough analysis before decisions are made on where to locate. Lack of proper infrastructure, complementary services and educated labour are all potential pitfalls in rural India, especially the first is a major reason why most new Indian SEZs seems to be located near major hubs/cities.

7.4 Special Economic Zone Advice related to Chapter 4.2

Similar to chapter 7.3 I will present advice related to the possible costs. This is presented in a shorter, condensed, fashion, since I have already found most of these to be rather insignificant, both in general (chapter 4.2) and in the Indian context (chapter 6.4.3). Since this part deals with policies for SEZs, given the fact that they are already there, I will not make specific recommendations for the alternative cost they bear.

The one cost issue that certainly is present – foregone tax revenues – is already a major point in the Indian debate and should lead to thorough analysis being made. This is also my recommendation – to analyse the extent of the possible problem and then set taxes right based on the findings. As for footlooseness I think India should rather concentrate on becoming attractive and then remaining so for investments. Some firms will close either way, but rather than try to force them to stay, scaring potential investors, one should try and ease the transition for workers and other interested parties, e.g. through training for other jobs. Inequalities and environmental issues do not seem to be problems in the Indian SEZ contexts, as explained in chapter 6.4.3.

7.5 General Policies

This is a bit outside the topic of this thesis, but touches upon special economic zones as well, so it deserves mentioning, though not an extensive analysis. As Madani (1999), p79 writes “if a policy is good for the economy as a whole, it is likely to be good in an EPZ (or at worst not cause harm in the EPZ)”.

As for services vs. manufacturing, none should be favoured in general. The Indian government should pick neither *national champions* nor particular industries (say, ITC), but rather remove bottlenecks and let the market decide in a well-governed neutral system. A fear is that the success of Bangalore will lead to many copycats, of which many are doomed to fail. This is, however, hard to avoid to some extent without resorting to a command economy, but can be discouraged by giving other options through removing constraints. Chanda (2002) lists the major constraint to India’s trade in services as: labour cross-border immobility, restrictions on foreign direct investment, government monopolies in some sectors and regulatory capture.

Agarwal (2006) proposes that India follow two strands, “occupying the ground vacated by East Asian economies” as they lose their competitiveness in labour-intensive manufactures due to higher wages and “is upgrading skills and being integrated into the production structures of the more advanced products of the developed economies”. I fully concur on this and believe it should be achieved more or less automatically when removing distortions.

7.6 Concluding Words – the Future of India

All in all I believe India has a far brighter future than past. Unfortunately, this has just as much to do with a past in utter poverty for the average Indian, as it has to do with the high growth that is now experienced. India since independence has been too good an example of the dangers of economic isolation, my hope is that this is heeded when deciding on future policies. As of now it looks like much positive is happening, but this could still be the aftershocks after the external payment crisis – a danger sign is the increasing amount of complacency.

As for special economic zones much remains to be seen in India. So far it has been next to insignificant, but there has been a tremendous buzz and development in recent years. If India can manage half the benefits experienced by China it should be worth the try. This, however, can only be achieved by including the rest of the economy. Beside, China really is a world apart, a mere change in lingo from export processing zone to special economic zone (to copy the large neighbour in the east) will not matter unless some of the zeal to achieve economic growth is also copied.

8. References

Acharya, S. (2006), *Essays on Macroeconomic Policy and Growth in India*, Oxford University Press, New Delhi

Adams, J. (2007), "The Enduring Appeal of "Special" Zones", *Far Eastern Economic Review*, 170(2), 13-15

Agarwal, M. (2006), "India and the World Economy in 2020", *India Quarterly*, 62(2), 203-227

Ahluwalia, M.S. (2002), "Economic Reforms in India since 1991: Has Gradualism Worked?" *Journal of Economic Perspectives*, 16(3)

Aitken, B.J. and Harrison, A.E. (1999), "Do Domestic Firms Benefit from Direct Foreign Investment? Evidence from Venezuela", *American Economic Review*, 89(3), 605-618

Aitken, B., Harrison, A. and Lipsey, R. (1996), "Wages and Foreign Ownership: A Comparative Study of Mexico, Venezuela, and the United States", *Journal of International Economics*, 40(3/4), 345-371

Altenburg, T. and Meyer-Stamer, J. (1999) "How to Promote Clusters: Policy Experiences from Latin America", *World Development*, (Special Issue on Industrial Clusters in Developing Countries) 27(9), 1693-1713

Bagchi, A.K. (1972), *Private Investment in India, 1900-1939*, Cambridge University Press, Cambridge

Balasubramanyam, V.N. (2001), "Foreign Direct Investment in Developing Countries: Determinants and Impact", OECD paper at OECD Global Forum On International Investment

Barba-Navaretti, G., Venables, A.J. and Barry, F.G. (2004), *Multinational Firms in the World Economy*, Princeton University Press, Princeton

Basu, A.K. (1996), "Unemployment Reduction in the Presence of a Rural Based Free Trade Zone: Some Policy Implications", *Journal of Economic Integration*, 11(4), 453-477

Batra, R.N. (1986), "A General Equilibrium Model of Multinational Corporations in Developing Economies", *Oxford Economic Papers*, 38, 342-353

Beladi, H. and Marjit, S. (1992), "Foreign capital and protectionism", *Canadian Journal of Economics*, 25(1), 233-238

Bell, M. and Albu, M. (1999), "Knowledge Systems and Technological Dynamism in Industrial Clusters in Developing Countries", *World Development*, (Special Issue on Industrial Clusters in Developing Countries) 27(9), 1715-1734

Bernard, A.B. and Bradford Jensen J. (2007), "Firm Structure, Multinationals, and Manufacturing Plant Deaths", *The Review of Economics and Statistics*, 89(2), 193-204

Bhagwati, J. and Desai, P. (1970), *India: Planning for Industrialization*, Oxford University Press, London,

Bhalla, A.S. (1998), "Sino-Indian Liberalization: The Role of Trade and Foreign Investment", *Economics of Planning*, 31, 151–173

Bjorvatn, K., Norman, V.D., Orvedal, L. and Tenold, S. (2006), "De gode hjelperne. Virkninger av utviklingen i Kina og India for norsk økonomi", SNF Rapport nr. 30/06

Bjørnestad, S. (2007), "Indias landbruk stopper opp", Aftenposten/E24.no, http://e24.no/utenriks/article1727695.ece, 9/4-2007

Brusco, S. (1992),"Small Firms and the Provision of Real Services" in Pyke, F. and Sengenberger, W. (editors), *Industrial Districts and Local Economic Regeneration*, International Institute of Labour Studies, Geneva

Caniëls, M.C.J. and Romijn, H.A. (2003), "Dynamic Clusters in Developing Countries: Collective Efficiency and Beyond", *Oxford Development Studies*, 31(3), 275-292

Chanda, R. (2002), *Globalization of Services – India's Opportunities and Constraints*, Oxford University Press, New Delhi

Chaudhuri, T.D. and Adhikari, S. (1993), "Free trade zones with Harris-Todaro unemployment – A note on Young-Miyagiwa", Journal of Development Economics, 41, 157-162

CII-McKinsey Report (2005), "Made in India – The next big manufacturing export story"

Copeland, B.R. and Taylor M.S. (1994), "North-South Trade and the Environment", *Quarterly Journal of Economics*, 109(3), 755-787

Dal Bó, E. (2006) "Regulatory Capture: A Review", *Oxford Review of Economic Policy*, 22(2), 203-225

Das, K. (2005), "Industrial Clustering in India: Local Dynamics and the Global Debate" in Das, K. (editor), *Indian Industrial Clusters*, Ashgate Publishing, Aldershot

Dean, J.M, Lovely, M.E. and Wang, H. (2005), "Are Foreign Investors Attracted to Weak Environmental Regulations? Evaluating the Evidence from China", *World Bank Policy Research Working Paper*, 3505

Devereux, J. and Chen, L.L. (1995). "Export Zones and Welfare: Another Look", *Oxford Economic Papers*, 47, 704-713

Dietzenbacher, E. and Mukhopadhyay, K. (2007), "An Empirical Examination of the Pollution Haven Hypothesis for India: Towards a Green Leontief Paradox?", *Environmental & Resource Economics*, 36, 427–449

Din, M. (1994), “Export processing zones and backward linkages”, *Journal of Development Economics*, 43, 369-385

Duflo, E. and Hanna, R. (2005), “Monitoring Works: Getting Teachers to Come to School”, *NBER Working Paper No. 11880*

Dunning, J.H. (1977), “Trade, location of economic activity and the multinational enterprise: A search for an eclectic approach” In Ohlin, B., Hesselborn, P.O. and Wikman P.M. (editors), *The International Allocation of Economic Activity*, 395-418. Macmillan, London

Dunning, J.H. (1992), *Multinational Enterprises and the Global Economy*, Addison-Wesley, Great Britain

Dunning, J.H. (1998), “Location and the Multinational Enterprise: A Neglected Factor?”, *Journal of International Business Studies*, 29(1), 45-66

Eskeland, G.S. and Harrison A.E. (2003), “Moving to Greener Pastures? Multinationals and the Pollution Haven Hypothesis,” *Journal of Development Economics*, 70, 1-23

Gangopadhyay, A. (2005), “India’s Policy towards its Diaspora: Continuity and Change”, *India Quarterly*, 61(4), 93-122

Ge, W. (1999a), “The Dynamics of Export-Processing Zones”, *UNCTAD Discussion Paper*, No. 144

Ge, W. (1999b), “Special Economic Zones and the Opening of the Chinese Economy: Some Lessons for Economic Liberalization”, *World Development*, 27(7), 1267-1285

Gordon, J. and Gupta, P. (2003), “Portfolio Flows into India: Do Domestic Fundamentals Matter?”, *IMF Working Paper*

Graham, E.M. (2004), “Do Export Processing Zones Attract FDI and its Benefits?”, *International Economics and Economic Policy*, 1(1), 87-103

Graham, E.M. (2005), “Do Export Processing Zones Attract FDI and its Benefits? Experience from China and Lessons for Russia” in Graham, E.M., Oding, N. and Welfens, P.J.J. (editors) *Internationalization and Economic Policy Reforms in Transition Countries*, Springer Berlin, Heidelberg, 251-272

Görg, H. and Strobl, E. (2003), “”Footloose” Multinationals”, *The Manchester School*, 71(1), 1-19

Haddad, M. and Harrison, A. (1993), “Are there Positive Spillovers from Direct Foreign Investment? Evidence from Panel Data for Morocco”, *Journal of Development studies*, 42, 51-74

Hamada, K. (1974), “An Economic Analysis of the Duty Free Zone”, Journal of *International Economic*, 4, 225-41

Hamilton, C. and Svensson, L.E.O. (1982), "On The Welfare Effects Of A 'Duty-Free Zone'. *Journal of International Economics*, 13(1), 45-64

Hamilton, C. and Svensson, L.E.O. (1983), "On the choice between capital import and labor export", *European Economic Review*, 20, 167-192

Harris, J.R. and Todaro M.P. (1970), "Migration, unemployment and development: A two-sector analysis", *American Economic Review* 60, 126-142.

Harrison, A.E. and McMillan, M. (2006), "Dispelling Some Myths about Offshore Outsourcing", *Academy of Management Perspectives*, forthcoming

Harrison, A.E. and Scorse, J. (2003) "Do Foreign Firms Pay More: Evidence from the Indonesian Manufacturing Sector 1990-1999", Working Paper, UC-Berkeley

Harrison, A.E. and Scorse, J. (2006) "Moving Up or Moving Out? Anti-Sweatshop Activists and Labor Market Outcomes", *NBER Working Paper 10492*

Hausmann, R. and Fernández-Arias, E. (2000), "Foreign Direct Investment: Good Cholesterol?", *Working Paper #417*, Inter-American Development Bank

Hayter, R. (1997), *The Dynamics of Industrial Location – The Factory, the Firm and the Production system*, Wiley, Chichester

ILO/UNCTC (1988), *Economic and social effects of multinational enterprises in export processing zones*, Geneva, ILO

JBIC (2002), "Foreign Direct Investment and Development: Where Do We Stand?", JBICI Research Paper No. 15, JBIC Institute, Japan Bank for International Cooperation

Kalam, A.P.J.A. and Rajan, Y.S. (1998), *India 2020: A Vision for the New Millennium*, Penguin Books India, New Delhi

Kapur, D. and Mehta, P.B. (2005), *Public Institutions in India*, Oxford University Press, New Delhi

Khandwalla, P.N. (2002), "Effective Organisational Response by Corporates to India's Liberalisation and Globalisation", *Asia Pacific Journal of Management*, 19, 423–448

KPMG (2002): "Driving Growth through Special Economic Zones", *International Convention on Special Economic Zones*

Kremer, M., Muralidharan, K., Chaudhury, N., Hammer, J. and Rogers, F.H. (2005), "Teacher Absence in India: A Snapshot", *Journal of the European Economic Association*, 3(2-3), 658-667

Krueger, A.O. (1975), *The Benefits and Costs of Import Substitution in India: A Microeconomic Study*, University of Minnesota Press, Minneapolis

Krueger, A.O. (1977), “Growth, Distortions, and Patterns of Trade among Many Countries”, *Princeton Studies in International Finance*, 40

Krueger, A.O. (1984), “Trade Policies in Developing Countries (chapter 11)”, in Jones, R.W. and Kenen, P.B (editors), *Handbook of International Economics Volume 1*, Elsevier, Amsterdam

Krugman, P. (1991), “Increasing Returns and Economic Geography” in Hendersen J.V. (editor) (2005), *New Economic Geography*, Edward Elgham Publishing, Cheltenham, UK

Kumar, A. (1999), *The Black Economy in India*, Penguin, New Delhi

Kumar, R. (1987), “Performance of Foreign and Domestic Firms in Export Processing Zones”, *World Development*, 15(10/11), 1309-1319

Kumar, R. (2003), “Corruption and Human Rights: Promoting Transparency in Governance and the Fundamental Right to Corruption-Free Service in India”, *Columbia Journal of Asian Law*, 17(1), 31-72

Kundra, A. (2000), *The Performance of India’s Export Zones – A Comparison with the Chinese Approach*, Sage Publications, New Delhi

Kusago T. and Tzannatos, Z. (1998), “Export Processing Zones: A Review in Need of Update”, *Social Protection Discussion Paper* No. 9802, World Bank

Kydland, F.E. and Prescott, E.C. (1977), “Rules Rather than Discretion: The Inconsistency of Optimal Plans.” *Journal of Political Economy*, 85(3), 473-491

Lall, S.V. (2006), “Infrastructure and regional growth, growth dynamics and policy relevance for India”, *The Annals of Regional Science* (online)

Litwack, J.M. and Qian, Y. (1998), “Balanced or Unbalanced Development: Special Economic Zones as Catalysts for Transition”, *Journal of Comparative Economics*, 26, 117-141

Lloyd, P. J. (1974), “A More General Theory of Price Distortions in Open Economies”, *Journal of International Economics*, 4(4), 365-386

Lucas, R.E. (1993), “Making a Miracle”, *Econometrica*, 61, 251-272

Madani, D. (1999), ”A Review of the Role and Impact of Export Processing Zones”, *World Bank Publication*

Majumdar, S.K. (1998), “Assessing comparative efficiency of the state-owned mixed and private sectors in Indian industry”, *Public Choice*, 96, 1–24

Malmberg, A. and Maskell, P. (2002), “The Elusive Concept of Localization Economies – Towards a Knowledge-based Theory of Spatial Clustering”, *Environment and Planning*, 34, 429-449

Mohan, R. (1993), ”Industrial Policy and Controls”, in Jalan, B. (editor), *The Indian Economy – Problems and Prospects*, New Delhi, India, Penguin Books, 85-115

Mohan, R. (Chair) (1998), *The India Infrastructure Report: Policy Imperative for Growth and Welfare*, Vols. 1-3, New Delhi

Mistry, A. Ladva, H.D., Raman, K.N., Kujur, M., Basu, P. and Waghmare, V. (2006), “Study and comparison of Indian and Chinese SEZs”, *Project Report, IIMA course: Infrastructure Development and Financing*

Miyagiwa, K.F. (1986), “A Reconsideration of the Welfare Economics of a Free-Trade Zone”, *Journal of International Economics*, 21, 337-350

Miyagiwa, K.F. (1992), “The locational choice for free-trade zones”, *Journal of Development Economics*, 40(1), 187-203

Muralidharan, T. (unknown year), “Whose job is it to make students employable?” *The Hindu*, www.hinduonnet.com/jobs/0610/2006101100040800.htm

Nadvi, K. and Shmitz, H. (1994), “Industrial Clusters in Less Developed Countries: Review of Experiences and Research Agenda”, *Discussion Paper No. 339*, Institute of Development Studies, Brighton

Nair P. and Singh B. (2006), “SEZ Drive in Gujarat”, *Ahmedabad Management Association*

National Council of Applied Economic Research (2001) “Economic and Policy Reforms in India”

OECD (1993), “Checklist for Foreign Direct Investment Incentive Policies”, report approved by the OECD Committee on International Investment and Multinational Enterprises (CIME)

OECD (2001), “Foreign Direct Investment for Development - Maximising Benefits, Minimising Costs”, report prepared within the framework of the activities of the Committee on International Investment and Multinational Enterprises (CIME)

Oman, C. (2001), “Corporate Governance and National Development”, *Technical Paper No. 180*, OECD Development Centre, Paris.

Palaniswami, S. and Prasad, B. (2002), “Management Perceptions of Market Liberalization”, *International Journal of Value-Based Management*, 15, 237–248

Parekh, B. (1993), “The Indian Diaspora” in Motwani, J.K., Gosine, M. and Motwani, J.B. (editors) *The Global Indian Diaspora: Yesterday, Today and Tomorrow,* Global Organization of People of Indian Origin, New York

Pass, C., Lowes, B. and Davies, L. (2005), *Collins internet-linked dictionary of Economics*, 4th edition, HarperCollins Publishers, Glasgow

Patnaik, P. (2000), “The Performance of the Indian Economy in the 1990s”, *South Asia,* 23(Special Issue), 193-206

Prasad, E. and Wei, S.-J. (2005), “The Chinese Approach to Capital Inflows”, IMF, Research Department

Raman, A.T. and Diwan, P. (2002), *Free Trade Zones (FTZs) to Special Economic Zones (SEZs) – The Great Indian Dream*, Pentagon Press, New Delhi

Ramaswamy, K.V (1999), “Productivity Growth, Protection and Plant Entry in a Deregulating Economy: The Case of India”, *Small Business Economics*, 13, 131–139

Reed, A.M. (2002), “Corporate Governance Reforms in India”, *Journal of Business Ethics*, 37, 249–268

Rodriguez, C. (1976), “A Note On The Economics Of The Duty Free Zone”, *Journal of International Economics*, 6(4), 385-388

Rodrik, D. (2004) "Getting institutions right", *CESifo DICE Report*, 2/2004.

Rondinelli, D.A. (1987), “Export Processing Zones and Economic Development in Asia: A Review and Reassessment of a Means of Promoting Growth and Jobs”, *American Journal of Economics and Sociology*, 46(1)

Root, F.R. and Ahmed, A.A. (1979), “Empirical Determinants of Manufacturing Direct Foreign Investment in Developing Countries”, *Economic Development & Cultural Change*, 27(4), 751-767

Schmitz, H. and Navi, K. (1999), “Clustering and Industrialisation: Introduction”, *World Development* (Special Issue on Industrial Clusters in Developing Countries), 27(9), 1503-1514

Scweinberger, A.G. (2003), ”Special Economic Zones and Quotas on Imported Intermediate Goods: A Policy Proposal”, *Oxford Economic Papers*, 55, 696-715

Sengupta, J. (2005), *India’s Economic Growth – A Strategy for the New Economy*, Palgrave MacMillan, Hampshire

Shah, A. and Patnaik, I. (2005), India’s Experience with Capital Flows: The Elusive Quest for a Sustainable Current Account Deficit”, *NBER Working Paper Series 11387*

Sikdar, S. (2002), *Contemporary Issues in Globalization – An Introduction to Theory and Policy in India*, Oxford University Press, New Delhi

Slaughter M.J. (2002), “Skill Upgrading in Developing Countries: Has Inward Foreign Direct Investment Played a Role?”, *Technical Paper No. 192*, OECD Development Centre, Paris.

Tan, H.W. and Batra, G. (1995), Enterprise Training in Developing Countries: Incidence, Productivity Effects and Policy Implications, World Bank, Washington, D.C.

Tetsu, K. (2004), “Locational Choice for Export Processing Zones in Developing Countries”, *The Singapore Economic Review*, 49(2), 179-193

Thomas, R.S. (1956), *Free Ports and Foreign Trade Zones*, Cornell Maritime Press, Cambridge, England

Tolentino, P.E. (2001), "From a Theory to a Paradigm: Examining the Eclectic Paradigm as a Framework in International Economics", *International Journal of the Economics of Business*, 8(2), 191-209

Tsui, K.Y. (1993), "Welfare Effects and Optimal Incentive Package of Export Processing Zones", *International Economic Journal*, 7(2), 77-89

Turunen-Red, A.H. and Woodland, A.D. (1991), "Strict Pareto-Improving Multilateral Reforms of Tariffs", *Econometrica*, 59(4), 1127-1152

UNCTAD (1999), "World Investment Report — Foreign Direct Investment and the Challenge of Development", United Nations, New York and Geneva.

te Velde, D.W. (2002), "Government Policies for Inward Foreign Direct Investment in Developing Countries: Implications for Human Capital Formation and Income Inequality", Working Paper No. 193 (Formerly Technical Paper No. 193), OECD Development Centre, Paris

Venables, A.J. (1996), "Equilibrium Locations of Vertically Linked Industries" in Hendersen J.V. (editor) (2005), *New Economic Geography*, Edward Elgham Publishing, Cheltenham, UK

Vohra, R. (2001), "Export and Economic Growth: Further Time Series - Evidence from Less-Developed Countries", *International Advances in Economic Research*, 7(3), 345-350

Wadhva, C.D. (2000), "Political Economy of Post-1991 Economic Reforms in India", *South Asia*, 13(Special Issue), 207-220

Warr, P.G. (1988), "Export Processing Zones – The Economics of Enclave Manufacturing", *Working Papers in Trade and Development,* 88/5, The Australian National University Research School of Pasific Studies

Wilson, B.A. and Keim, G.N. (2006), "India and the Global Economy", Business Economics, January 2006

Wong, K. (1986), "International factor movements, repatriation and welfare" , *Journal of International Economics*, 21, 327-335

World Bank (1992), "Export Processing Zones", *Policy and Research Series,* 20, Industry Development Division, Industry and Energy Department and Trade Policy Division, Country Economics Department, The World Bank, Washington DC

Young, L. (1987), "Intermediate Goods and the Formation of Duty-Free Zones", *Journal of Development Economics*, 25, 369-384

Young, L. (1992), "Unemployment and the Optimal Export-Processing Zone", *Journal of Development Economics*, 37, 369-385

Young, L. and Miyagiwa, K.F. (1987), "Unemployment and the Formation of Duty-Free Zones", *Journal of Development Economics*, 26, 397-405

CIA The World Factbook

"India's Economy", *The Economist*,
http://economist.com/research/backgrounders/displayBackgrounder.cfm?bg=2454949

"Foreign Investment in India – To cap it all" *The Economist*, April 21st 2007

"The long arms of the law", *The Economist*, June 29th 2006

Lexington, "The Politics of Plenty" The Economist, May 26th 2007

Transparency International http://www.transparency.org/news_room/faq/corruption_faq

Nytte-Kostnadsanalyser: Veiledning i bruk av lønnsomhetsanalyser i offentlig sektor
NOU: 1998:16
http://www.regjeringen.no/Rpub/NOU/19981998/016/PDFA/NOU199819980016000DDDPDFA.pdf

9. Appendix

9.1 Excerpt from ”Industrial Policy and Controls”

Until the recent industrial and trade policy reforms, the establishment and operation of an industrial enterprise required approvals from the central government at almost every step […]. Before making an investment, an entrepreneur had to first obtain approval in principle from the Ministry of Industry. The granting of this approval resulted in the issuance of a Letter of Intent (LOI). Armed with this LOI, the entrepreneur could then tie up other requirements for setting up the project. If he needed to import a capital good, he had to obtain a capital goods import licence from the Chief Controller of Imports & Exports (CCI&E) in the Ministry of Commerce. The approval for the import, however, was given by a committee set up by the Ministry of Industry. If there was also need for a foreign technology collaboration agreement, the entrepreneur had to obtain a specific approval for this (a Foreign Collaboration – FC – approval) from a committee chaired by the Finance Secretary but serviced by the Ministry of Industry. In order to raise funds for the project, if an entrepreneur wanted to go to the capital market, he needed separate approval from the Controller of Capital Issues in the Ministry of Finance. For imports of raw materials and components, separate licences had to be obtained at an annual basis from the CCI&E. In each case an ‘essentiality’ and indigenous non- availability clearance had to be given by the technical wing of the Ministry of Industry (the Directorate General of Technical Development – DGDT). Once everything was tied up and the unit was about to go into production, the entrepreneur had to go back to the Ministry of Industry for an ‘Industrial Licence’.

In addition to these approvals, since the enactment of the MRTP Act in 1969, the firms covered under this needed to obtain separate MRTP clearances from the Department of Company Affairs. Further, resulting from the desire to promote small-scale industries, 836 items have been reserved for production in small-scale enterprises. Since 1956 there has also been a list of industries reserved for exclusive production in the public sector. Since 1977, there has also been a ban on the location of industries in the largest twenty to thirty cities. In 1988, this ban was extended to include municipal

areas of all towns and cities and to specified areas of influence around the largest twenty-one cities.

(Source: ”Industrial Policy and Controls”, by Rakesh Mohan (1993). Pages 96-97 in “The Indian Economy – Problems and Prospects”, edited by Bimal Jalan.)

9.2 Excerpt from “Political Economy of Post-1991 Economic Reforms in India”

The over-regulatory economic regime extended to virtually all sectors of the economy (especially the overprotected industrial sector and an overvalued exchange rate), and had perpetual shortages and created a non-competitive industrial sector. The economic system under the regime thrived on activities involving directly unproductive rent seeking/sharing by various lobby groups and political patronage. Through micro-level state intervention, this regime had a clear anti-export bias and imposed binding constraints on the growth of the real sector of the economy, including the agricultural sector.

The beneficiaries of the prevailing regulatory system (politicians, bureaucrats and big industrialists), were quite comfortable with quick and assured returns. They did not want to change to a different (East Asian) type of system with uncertain long-term results.

(Source: “Political Economy of Post-1991 Economic Reforms in India”, by Charan D. Wadhva (2000). Page 208 in *South Asia*, 13 (Special Issue))

9.3 Skill Mix in Foreign Affiliates of MNEs

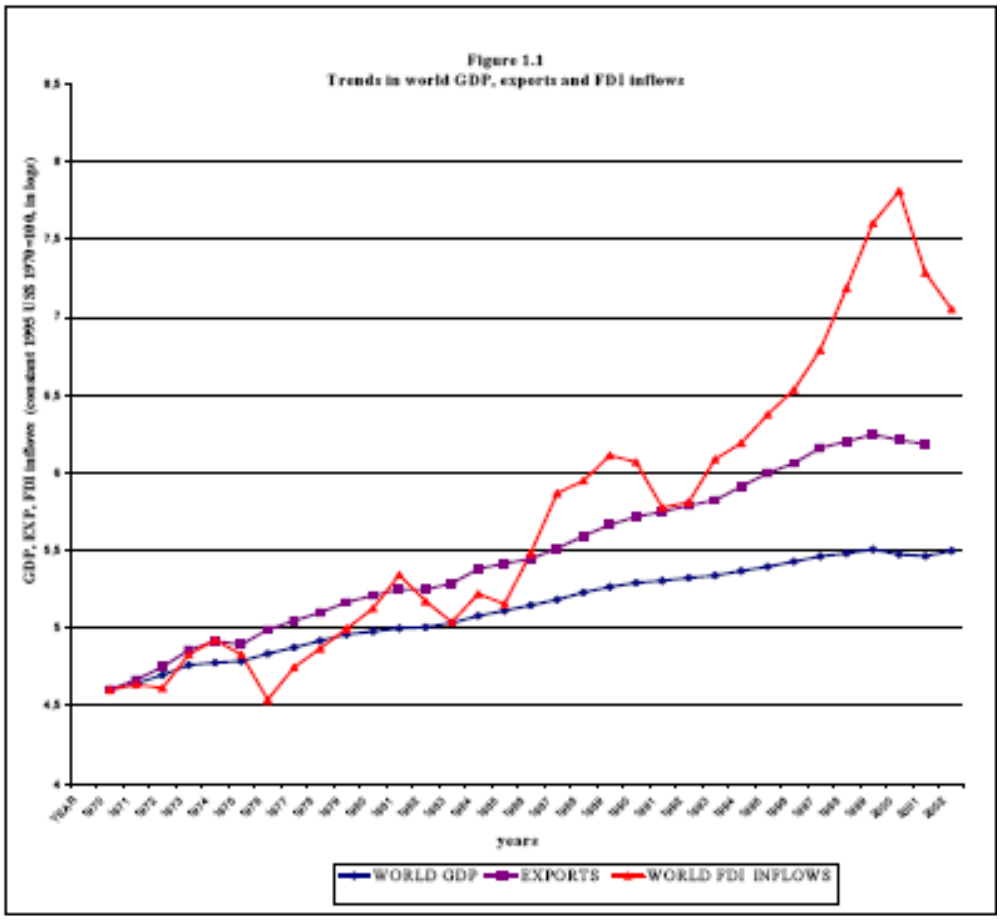
Table II.1. **The Skill Mix of Employment in Foreign Affiliates of US-Headquartered Multinationals**

Country	1977 P Emp	1977 NP Emp	1977 NP Share	1994 P Emp	1994 NP Emp	1994 NP Share
World	2 370.0	1 400.0	0.37	2 093.4	1 422.6	0.41
Brazil	179.5	116.7	0.39	133.9	91.4	0.41
India	19.3	14.9	0.44	8.2	7.6	0.48
Malaysia	19.0	6.7	0.26	67.3	42.9	0.39
Mexico	103.1	68.1	0.40	284.2	131.0	0.32
Philippines	44.7	16.4	0.27	29.1	23.1	0.44
Singapore	27.4	5.1	0.15	44.5	24.6	0.36
Chinese Taipei	45.3	13.0	0.22	22.3	15.7	0.41

Notes: "P Emp" indicates production worker employment, in thousands. "NP Emp" indicates non-production worker employment, in thousands. "NP Share" indicates the share of total employment accounted for by non-production workers.
Source: All data come from the Bureau of Economic Analysis.

(Source: Slaughter, 2002, p14)

9.4 Trends in World GDP, Exports and FDI Inflows



(Source: Barba-Navaretti et al., 2004, chapter 1, p4)

9.5 The Evolution of Terminology

Term	Main users and date of first use
Free trade zone	Traditional term since nineteenth century; ILO (1982)
Foreign trade zone	Individual authors (R.S.Toman, 1956; W.Dymsza, 1964), India (1983)
Industrial free zone	Ireland (pre-1970), UNIDO (1971), Liberia (1975)
Free zone	UNCTAD (1973), USAID (1982), United Arab Emirates (1983)
Maquiladoras	Mexico (early 1970s)
Export free zone	Ireland (1975), UNIDO (1976)
Duty free export processing zone	Republic of Korea (1975)
Export processing free zone	UNIDO (1976), UNCTAD (1983)
Free production zone	Stamberg Institute (1977)
Export processing zone	Philippines (1977), Harvard University (1977), APO (1977), WEPZA (1978), UNIDO (1979), Malaysia (1980), Pakistan (1980), Singapore (1982), UNCTC (1982), ILO (1983), The Economist (1979)
Special economic zone	China (1979)
Tax free zone	Individual authors (W.H. and D.B. Diamond, 1980)
Tax free trade zone	Individual author (D.B. Diamond, 1980)
Investment promotion zone	Sri Lanka (1981)
Free economic zone	Individual author (H.Grubel, 1982)
Free export zone	Republic of Korea (1983)
Free export processing zone	OECD (1984)
Privileged export zone	Individual author (N.N. Sachitanand, 1984)
Industrial export processing zone	Individual author (P.Ryan, 1985)

APO Asian Productivity Organization
ILO International Labour Office
OECD Organization for Economic Co-operation and Development
UNCTAD United Nations Conference on Trade and Development
UNCTC United Nations Centre on Transnational Corporations
UNIDO United Nations Industrial Development Organization
USAID United States Agency for International Development
WEPZA World Export Processing Zone Association

(Source: Kusago and Tzannatos, 1998, p31) (Original source (which I could not retrieve): ILO/UNCTC (1988), *Economic and social effects of multinational enterprises in export processing zones*, Geneva, ILO, p5)

9.6 Some Internationally Used Definitions

UNIDO (United Nations Industrial Development Organization)
an EPZ is a relatively small, geographically separated area within a country, the purpose of which is to attract export-oriented industries, by offering them especially favourable investment and trade conditions as compared with the remainder of the host country. In particular, the EPZs provide for the importation of goods to be used in the production of exports on a bonded duty free basis (UNIDO, 1980).
UNCTAD (United Nations Conference on Trade and Development)
EPZs are industrial estates which form enclaves within the national customs territory and are usually situated near an international port and/or airport. The entire production of such zones is normally exported. Imports of raw materials, intermediate products, equipment and

machinery required for export production are not subject to customs duty (UNCTAD, 1985: 10).

ILO (International Labour Office) /UNCTC (United Nations Centre on Transnational Corporations)

an EPZ could be defined here as a clearly delineated industrial estate which constitutes a free trade enclave in the customs and trade regime of a country, and where foreign manufacturing firms producing mainly for export benefit from a certain number of fiscal and financial incentives (ILO/UNCTC, 1988: 4).

The World Bank

an export processing zone is an industrial estate, usually a fenced-in area of 10 to 300 hectares, that specializes in manufacturing for export. It offers firms free trade conditions and a liberal regulatory environment (World Bank 1992: 7).

WEPZA (World Export Processing Zone Association)

EPZs are all government authorized areas such as free ports, free trade zones, custom free zones, industrial free zones or foreign trade or any other type of zone, as the Council may from time to time decide to include (Statutes of the WEPZA, ID/W.6/266/6, 28th February 1978).

(Source: Kusago and Tzannatos, 1998, p32)

9.7 Some Common Abbreviations in the Literature

MNE = Multinational Enterprise
MNC = Multinational Corporation
SEZ = Special Economic Zone
EPZ = Export Processing Zone
FTZ = Free Trade Zone
FDI = Foreign Direct Investments
M&A = Mergers and Acquisitions

9.8 Statistics on Indian SEZs

Table 9.1 Employment in the Indian Zones

Year	Total Employment (number)	Average zone employment (number)	Average annual employment growth between the two years (%)
1966	70	70	
1970	450	450	50.2
1975	1,450	725	41.9
1980	6,000	3,000	34.2
1985	16,200	4,050	22.6
1990	35,205	5,868	16.9

1995	61,431	10,239	11.9
2000	81,371	11,624	6.2
2002	88,977	12,711	5.2

(Source: Nair and Singh (2006), p16)

Table 9.2 Type of Investment by Source in Indian Zones

ZONE	NRI	FOREIGN	DOMESTIC	TOTAL
KAFTZ	2.6	0.6	82.4	85.6
SEEPZ	13.8	21.7	222.9	258.4
MEPZ	6.6	45.3	68.2	120.2
CEPZ	18	25	217	260
FEPZ	5	5.7	178.3	189.1
NEPZ	34.5	54	341	429.5
TOTL	**80.6**	**152.4**	**1,109.9**	**1,342.9**

(Source: Nair and Singh (2006), p14) (Indian rupees x 10 000 000, as of 31st March 1998)

Table 9.3 Indian Zones' Share of Total Indian Exports

Year	Exports of EPZs / SEZs	India's Exports	Share of EPZs/SEZs in All India
1980-81	44.7	6,617.00	0.68%
1985-86	322.9	10,865.00	2.96%
1990-91	986.70	32,553.00	3.03%
2000-01	8,552.30	203,571.00	4.20%
2002-03	10,056.70	255,137.00	4.81%
2003-04	13,813.56	293,367.00	4.70%
2004-05	18,655.00	361,879.00	5.15%

(Source: Nair and Singh (2006), p18) (Indian rupees x 10 000 000)

Table 9.4 Size and Share of Exports from Indian Zones by Sector

SECTOR	2000-01	2001-02	2002-03	2003-04
Gem & Jewellery	3,008.14 (35.2%)	3,227.83 (35.1%)	4,247.14 (42.2%)	6,513.2 (47.2%)
Engineering & Software	1,713.05 (20%)	1,601.59 (17.4%)	1,637.08 (16.3%)	1,643.04 (11.9%)
Engineering & Hardware	1,683.64 (19.7%)	1,505.78 (16.4%)	1,738.2 (17.3%)	1,541.31 (11.2%)
Textiles	699.12 (3.2%)	930.50 (10.1%)	731.07 (7.3%)	1,086.35 (7.8%)
Engineering Goods	476.80 (5.6%)	431.69 (4.7%)	478.24 (4.6%)	514.18 (3.6%)
Pharmaceuticals & Chemicals	428.81 (15%)	566.02 (6.2%)	625.60 (6.3%)	673.60 (4.9%)
Others	256.47 (3%)	620.72 (6.8%)	292.94 (2.9%)	341.90 (2.5%)

Plastic & Rubber Products	138.17 (1.6%)	148.69 (1.6%)	66.79 (0.7%)	99.32 (0.7%)
Leather & Leather Products	101.67 (1.2%)	128.73 (1.4%)	110.44 (1.1%)	233.12 (1.7%)
Food & Agro Products	37.51 (0.4%)	28 (0.3%)	125.87 (1.3%)	340.81 (2.5%)
Trading	8.92 (0.1%)	-	-	826.73 (6%)
Total	**8,552.3**	**9,189.55**	**10,053.37**	**13,813.59**

(Source: Nair and Singh (2006), p21) (Indian rupees x 10 000 000)