

Should industrial development then be regulated by the government, or follow a planned path, or be exposed to foreign trade and investment so that the domestic industries can learn from the industries of the developed world?¹

ECO-3A09C Development Economics

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1. Introduction

Industrialisation can be defined as;

“The process in which a society or country transforms itself from a primarily agricultural society into one based on the manufacturing of goods and services...”²

The Industrial revolution in the 18th and 19th century propelled the United Kingdom into unprecedented growth, later extending throughout Western Europe and North America. Robert E. Lucas, Jr. speaking on the Industrial revolution said that,

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¹ Full Question: *Industrial development is essential for growth; but it also creates problems like mass migration to urban areas, emergence of informal sector and child labour. Should industrial development then be regulated by the government, or follow a planned path, or be exposed to foreign trade and investment so that the domestic industries can learn from the industries of the developed world? Choose two countries that have pursued policies to achieve industrialisation with or without foreign trade and investment, and in light of their experiences discuss how far the objective of industrialisation can be met.*

² <http://www.investopedia.com/terms/i/industrialization.asp#ixzz1jthpZhkR>

"For the first time in history, the living standards of the masses of ordinary people have begun to undergo sustained growth ... Nothing remotely like this economic behavior has happened before".³

Since then developing countries have looked to Industrialisation as the key to sustained economic growth.

Globalisation, the process of worldwide integration and development has had a profound effect on developing countries due to the increased integration between developed and developing countries through trade, direct foreign investment via multinational corporations and portfolio investments. Because of this developing countries are keen to Industrialise to compete on the world markets which have become more easily accessible.

Developing countries have typically been exporters of agricultural (primary) products rather than manufacturing products. The Prebisch-singer hypothesis argued that there would be a long term decline in the terms of trade of primary products due to the combination of price elasticity of demand and low incomes. As a result income would continue to be transferred from poor to rich countries, therefore developing countries should focus on exporting manufacturing products to achieve long term growth.

2. The Pitfalls of Industrialisation

Since the 1960s many developing countries have adopted policies to encourage Industrialisation, as it was seen as the best way to achieve high growth through trade with developed countries. For many developing countries this caused a decline in agriculture in favour of manufacturing. This pattern of structural change from agriculture to manufacturing was outlined in the Lewis two sector model which was a popular theory of development in the 1960s and 70s. It outlined how surplus labour from the agricultural sector gradually transfers to the industrial sector which creates high growth and sustained development. Although this theory reflects historic experience of western development it does not accurately describe developing countries today (although China is a possibility).

³ Lucas, Robert E., Jr. (2002). *Lectures on Economic Growth*. Cambridge: Harvard University Press. pp. 109–10. [ISBN 9780674016019](https://doi.org/10.1017/CBO9780511526844.006).

However it is useful in identifying why industrialization causes mass migration to urban areas, as agricultural labour is moving to urban areas to acquire jobs in the higher paid manufacturing industry. An example of mass migration was in the 1990s in India where 20.5 million people moved from rural to urban areas (Census of India 2001)⁴.

This process of migration was identified in Todaro's migration model that explains why workers migrate despite high urban unemployment. Mass migration to urban areas can be an issue for developing countries as it increases urban unemployment and creates socioeconomic problems in cities. It can also increase inequality as found in Iran where inequality in urban areas tended to increase with migration when migrants were from poorer areas (Mohtadi 1986).

Another issue that can be caused by Industrial development is the emergence of the informal sector. This sector consists of,

"...Small competitive individual or family run firms, petty retail trade and services, labour-intensive methods, free entry and market determined factor and product prices."⁵

The problem with informal sectors is that self employed workers are generally unskilled and lack formal education, as a result of this wage rates are generally lower in the informal sector than the formal sector. In Africa a wage penalty of 12% was identified for those working in the informal sector (Badaoui et al 2008). Because the informal sector is unregulated workers do not have protective measures in place to ensure good working conditions or pension schemes. Due to the lower wages, workers have to work longer hours to support their families, if the long hours are not sufficient then child labour may occur in order for families to afford to sustain their lifestyles. This is the subsistence wage as identified by Basu Vann in his theory of child labour, that means that families have to send their children to work rather than into education.

⁴ http://www.iomindia.in/migration_in_india.html

⁵ Todaro. M P, Smith. S- "Economic Development" Eleventh Edition 2011 p328

Child labour in developing countries has become more profound with industrialization as there are more opportunities for children to work in manufacturing factories. As business ethics have become more prominent in western society, awareness of child labour in developing countries has been heightened. A good example of this was the campaign against firms such as Nike and Primark which were believed to have factories in developing countries such as Malaysia and India that used child labour. Child labour is highest in Asia with an estimated 153 million child labourers followed by Africa with 80 million (World Bank data)⁶.

Although economic growth is an important aim for developing countries it should not be the main focus. A rise in GDP may not necessarily improve the quality of life for inhabitants as it may mean that inequalities have just increased between the rich and the poor. Growth may not bring about improvements in healthcare and education. Human development needs to be focused on as well as growth, for example improving education and healthcare, if developing countries are set to improve the quality of life for their inhabitants.

3. Strategies of Industrialisation

The problems that can be caused by Industrialization could be reduced via government intervention. There are three approaches the government can take in its role of running the economy to pursue industrialization; a regulated economy (free market but with protectionist measures in place), planned development and trade liberalisation.

Regulated

Western countries such as the UK and Spain are good examples of regulated economies. The governments of Spain and the UK promote free trade via membership of the EU whereby member

⁶ <http://info.worldbank.org/etools/docs/library/237384/toolkitfr/pdf/facts.pdf>

countries in the European Union can trade with each other without tariffs or trade barriers. However there are tariffs in place for countries outside of the EU. Tariffs and quotas are protectionist measures put in place to reduce the number of imports and raise tax revenue for the Government. Taxes on international trade can bring in substantial revenue for developing countries for example the case of Bangladesh where 26.55% of the country's revenue consists of taxes on international trade (2008)⁷.

Import Substitution

A developing country may seek an import substitution strategy to use policies that encourage self-reliance in the domestic development of technology. By doing this a country will erect tariff barriers or quotas on imported goods and then set up local industries to produce these goods and thereby encourage "learning by doing" in manufacturing and develop technology appropriate to the country's resource endowment. The benefits of such a strategy are that a developing country can reap the rewards of greater domestic industrial diversification and ultimately export more as the positive externalities of learning by doing enable domestic prices to become more competitive in the world market. However this strategy has been largely unsuccessful, many domestic industries remain inefficient and costly to operate when protected by tariffs. Key import substituters such as Mexico and Turkey made the decision to push towards trade liberalisation and away from import substitution (Rodrik 1992).

Planned development

A planned development economy has a large government influence. The government attempts to make decisions that in the long run will influence how the factors of production such as labour will be allocated in different industries. By doing this the government can control the quantity of goods and services produced in each time period. Examples of countries that followed a planned approach are

⁷ http://www.nationmaster.com/graph/tax_tax_on_int_tra_of_rev-taxation-taxes-international-trade-revenue

China and the Soviet Union from the 1930s which had heavy state control of investment and public ownership of industrial assets. There are different types of planning the government can follow; a partial plan that covers only certain industries and a comprehensive plan that covers all of the national economy. By following a planned approach the government can seek to alleviate market failures such as externalities, differences between social and private valuations as well as coordinating investment. They may also seek to protect their economies by using protectionist methods.

However as noted in the Washington consensus, governments may actually make things worse in the economy. Experience of developing countries government policies have actually increased differences between social and private valuations by policies implemented such as minimum wage levels or tying wages to academic achievement that causes wage levels to rise above scarcity value.

Trade Liberalisation

The trade liberalisation approach promotes free trade without the use of tariffs or trade barriers or heavy government intervention, an example being Hong Kong. By removing trade barriers and tariffs,

“Consumers become better off because their incomes stretch further, and resources are used more efficiently because they are no longer used to produce goods that could be imported at a lower price.” Dornbusch (1992).

The absence of trade barriers and tariffs encourages international trade, prior to 1947 many countries such as the U.S emplaced high tariffs on international trade to reduce imports and in retaliation to other countries tariffs. To prevent this negative cycle the general agreement on tariffs and trade was introduced in 1947 and later replaced by the World trade organisation in 1995 to promote free trade.⁸

Trade liberalisation also advocates for less government intervention as intervention typically fails to correct market failures through the use of government policies. By reducing the role of the public sector and encouraging the private sector a more productive allocation of investment can be achieved.

⁸ Todaro. M P, Smith. S- “Economic Development” Eleventh Edition 2011 p566

However that is not to say that public organisations cannot be run efficiently, an example being the Pohang steel company in South Korea that was highly efficient until its privatisation in 2000.⁹

The free market approach was boosted in the 1980s and 90s by the Washington Consensus, a development policy that held the view that a controlling government was more likely to worsen things than make them better and the view that poverty would be taken care of through growth and development via free trade. This consensus however has limited applicability due to its failure to mention points on factors such reducing inequality and shared growth. It also fails to apply to two of the most successful countries to achieve economic development, South Korea and Taiwan.

Trade is an important stimulator of economic growth and allows domestic industries the ability to purchase raw materials without paying tariffs. A number of theories on trade help outline the benefits of a free trade market. One of which is comparative advantage which can be defined as,

“A situation in which a country, individual, company or region can produce a good at a lower opportunity cost than a competitor.”¹⁰

The principle of comparative advantage states that under competitive conditions a country will specialize in the export of a product that it can produce at the lowest relative cost.

However this theory can constrain industrial development because of the comparative advantage of low income countries in the exporting of primary products.

Many smaller countries' substantial income is from the export of primary and agricultural products, however the reliance on volatile primary products can lead to export dependence. This is an issue as on

⁹ Todaro. M P, Smith. S- “Economic Development” Eleventh Edition 2011 p528

¹⁰ <http://www.investopedia.com/terms/c/comparativeadvantage.asp#ixzz1juKuytUl>

average since 2002 the long term trend of prices for these products is downward¹¹. This is further backed up by looking at the income elasticity and price elasticity of demand for primary products, both of which are relatively low. In contrast the price elasticity's for manufacturing products are high. This suggests that moving towards industrialisation and exporting more manufacturing goods is the answer to sustained development and growth, despite primary products comparative advantage.

Comparative advantage theory was extended in the factor endowment theory by Heckscher and Ohlin.

They outlined that countries will trade with the commodity that makes use of the abundant factors of production in the host country. For example a country with low wages and abundant labour should focus on producing more labour intensive products such as agricultural products and more capital abundant countries will have a cost advantage in producing manufacturing goods.

Critiques of traditional free trade

However there are a number of critiques in traditional free trade theory with regards to developing countries. Without government intervention the coexistence of inequality will continue to exist due to the disproportionate distribution of benefits from economic growth. The success of South Korea was largely aided by its government's promotion of export industries and therefore successful government intervention can be achieved to aid growth.

As argued by Porter in his Competitive Advantage of Nations, a qualitative difference between basic and advanced factors of production exists.

"... A Nation's competitiveness depends on the capacity of its industry to innovate and upgrade. Companies gain advantage against the world's best competitors because of pressure and challenge."(Porter 1997)

¹¹ Todaro. M P, Smith. S- "Economic Development" Eleventh Edition 2011 p568

Comparative advantage comes from physical factor endowment therefore only applies to simple factors such as undeveloped physical resources and unskilled labour. Competitive advantage comes from advanced inputs such as high skilled labour.

Foreign Investment

A key stimulator of economic growth for developing countries is foreign investment. It can come in two forms, private foreign direct investment which consists of overseas equity investments made by multinational corporations or foreign portfolio investment for example stocks and bonds that are invested in developing countries credit and equity markets.

There are advantages and disadvantages to foreign investment. The major advantages of foreign direct investment are that, the extra investment fills the gap between domestically available capital and resources and what is needed for increased growth. Multi national corporations that locate in developing countries also provide extra tax revenue for the government via taxes on profits and provide workers with new skills and entrepreneurship that can be transferred to the home country's workers. MNCs bring with them new technologies that can be transferred directly through licensing or through joint venture. Countries such as Africa and Latin America have had success in technological transfer.

However foreign investment and more notably the introduction of MNCs can cause some disadvantages. MNCs may stifle competition and cause crowding out of local investment firms. Due to the accounting practice of transfer pricing MNCs can lower the taxes paid to the host government. The goods that are often produced by MNCs are also inappropriate for the host country as they are only demanded by the few, rich minority of the population. Also foreign direct investment is not necessarily needed to gain technological transfer as shown by countries such as Japan that learnt new technologies through imitation and backward engineering. Finally due to their size and power MNCs are able to influence the government in their favour that may be of detriment to future development.

Despite these negatives foreign investment is an important stimulus for economic development as long as MNCs objectives and activities coincide with that of the host government.

4. India Case Study

India is an example of a country that followed a planning approach in the 1950s to aid development. After India gained independence in 1947, the government looked at the progress achieved by the Soviet Union and sought to follow the same approach. This led to the Indian economy being characterized by heavy regulation, public ownership, protectionism and slow growth.

Planning served as a vital form of legitimization for the newly independent Indian state, which inherited its laws, institutional apparatus, and practices from the British (Chatterjee 1989).

The Indian government regularly issued 5 year target plans for growth from the 1950s onward and is currently on its eleventh five year plan.

Average Annual Growth Rates of GDP and Major Sectors

	1900/01- 1929/30	1930/31 – 1946/47	1951/52 – 1966/67	1967/68 – 1980/81	1981/82 – 1990/91	1991/92 – 2000/01
	(1)	(2)	(3)	(4)	(5)	(6)
Agriculture and Allied	0.5	0.2	1.8	3.3	3.5	2.7
Industry	0.9	1.2	6.3	4.1	7.1	5.7
Services	1.6	1.7	4.8	4.3	6.8	7.6
GDP	0.8	0.8	3.4	3.8	5.6	5.6
Per Capita GDP	0.4	-0.5	1.4	1.5	3.4	3.5

Source: Central Statistical Organisation (2001) and Sivasubramonian (2000)

Note: The growth rates in Columns (1) and (2) actually refer to Primary, Secondary and Tertiary sectors, which are close approximations to Agriculture, Industry and Services, respectively.

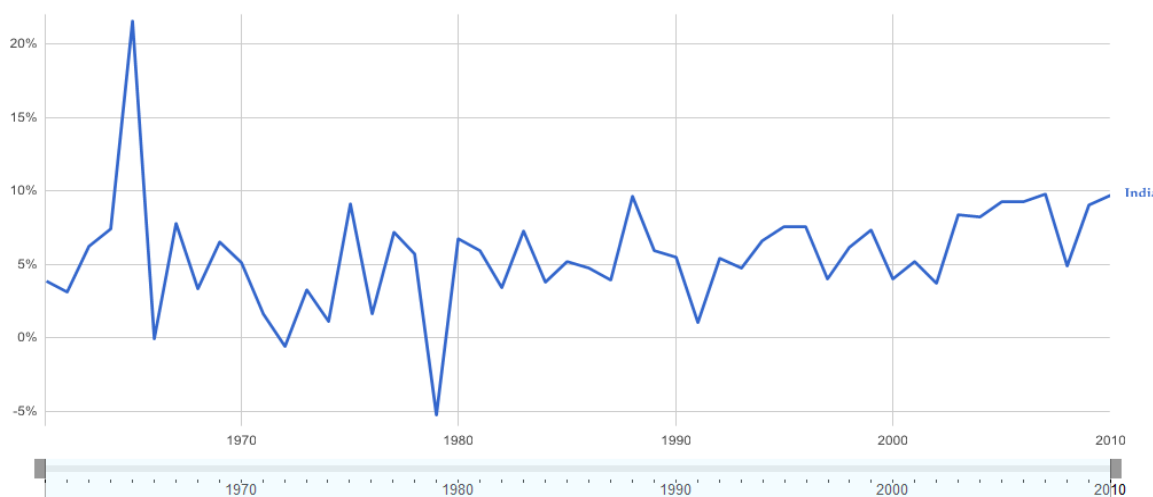
Table 1

The first five year's planned target was 2.1% annual GDP growth, actual growth in this period was around 3.5%. By looking at figure one in the appendix and table 1, it can be seen that during British colonial rule India experienced very slow growth at 1% a year, during the planning approach in the 1950's growth increased to 3.5% but per capita growth remained low at 1.5%. During the 1980's and 90's growth accelerated to 5.6%. This indicates planning success in India. However the favourable development planning in the 60s was hit by severe macroeconomic problems as seen in figure 1, to some this was observed to be a crisis (Streeten and Lipton, 1968). In addition growth was low compared to other Asian countries including Taiwan and Singapore, during the same time period.

Figure

1¹²

India
followed
a strong
import



substitution strategy that failed to materialize competitive public industries as they remained inefficient because of the protective measures that were in place.

During the 1990s major pro-liberalisation reform was conducted in a move towards a free market economy, due to a crisis in India's balance of payments which was in part caused by the collapse of the Soviet Union, one of India's biggest trading partners. Trade tariffs and interest rates were lowered causing the collapse of some public monopolies.

As a result of the reform India experienced high rates of growth peaking at 9.8% in 2007 as shown in Figure 1.

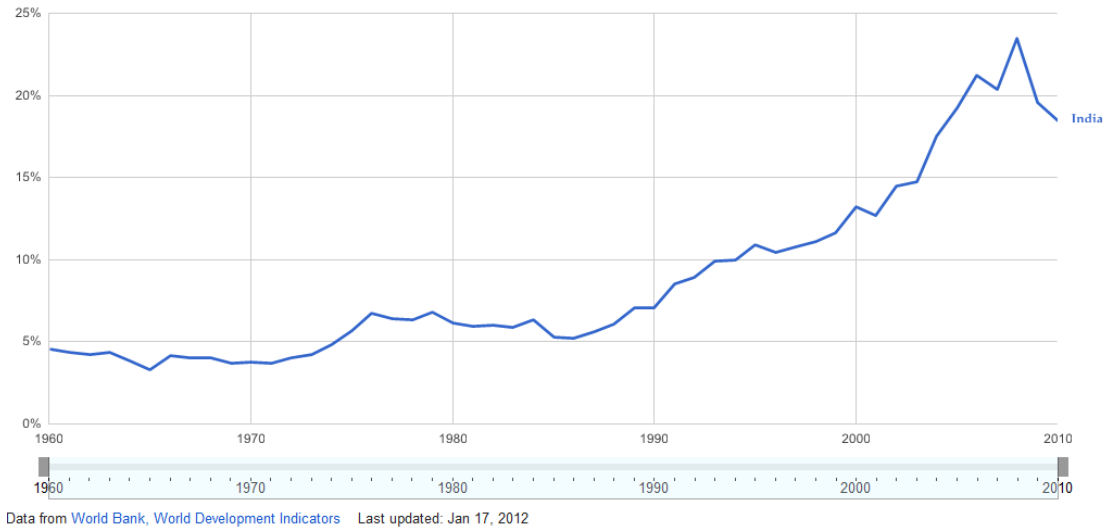


Figure 2¹³

Figure 2 shows the increase in exports after the pro-liberalisation reform in the 90's. Industries in India underwent significant changes after the reforms. Many industries were privatised, import restrictions were removed and foreign competition was allowed into India. Domestic industries had to cut costs and improve efficiency to allow them to become more competitive on the world markets.

Between 2004 and 2005 financial limitations were removed which allowed for a large inflow of private foreign investment. During 2000 to 2010 India attracted \$178 billion of FDI.¹⁴ However financial restrictions are still in place for sectors such as Insurance and retail.

Growth however has not been rapid enough to eliminate abject poverty (Byrd 1990). Planned economies overlooked serious problems as they ignored inefficiency and overlooked asymmetric information as a result inequality and poverty increased in India.

¹³

http://www.google.co.uk/publicdata/explore?ds=d5bncppjof8f9_&met_y=ny_gdp_mktpr_cd&idim=country:GBR&dl=en&hl=en&q=gdp+in+uk#ctype=l&strail=false&bcs=d&nselm=h&met_y=ne_exp_gnfs_zs&scale_y=lin&ind_y=false&rdim=country&idim=country:IND&ifdim=country&hl=en&dl=en

¹⁴ [India FDI Fact sheet – September 2010](http://www.dipp.nic.in/fdi_statistics/india_fdi_index.htm)". Department of Industrial Policy & Promotion, Ministry of Commerce and Industry. http://www.dipp.nic.in/fdi_statistics/india_fdi_index.htm. Retrieved 2010-12-21.

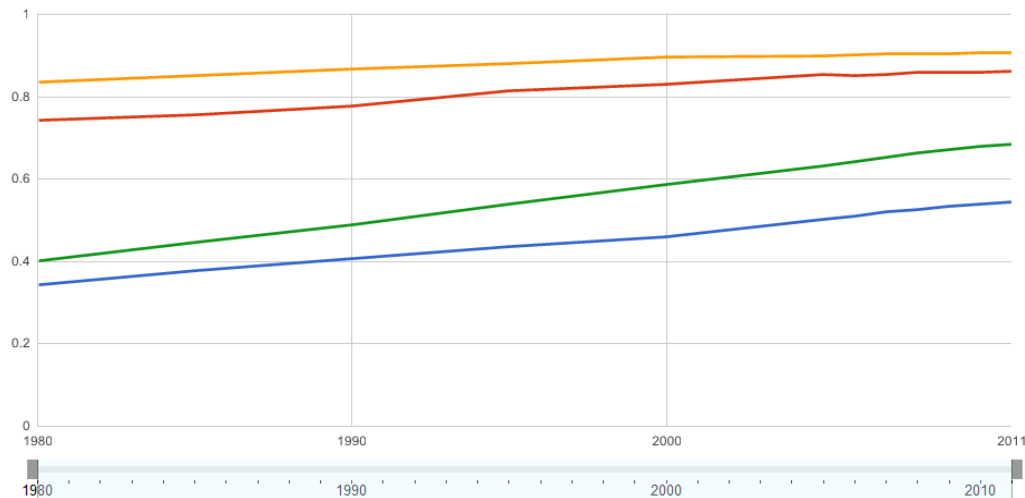
Figure 3¹⁵

Figure 3 shows the Human

Data from Human Development Report 2011, United Nations Development Programme Last updated: Nov 2, 2011

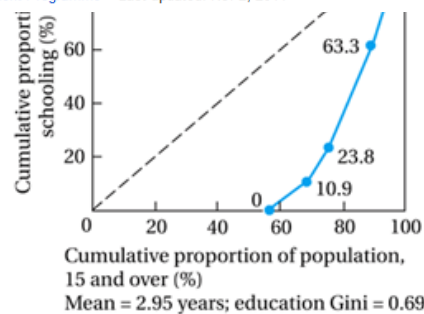
development index that illustrates the large gap between India and fellow developing country China and to developed Countries such as the UK and US in human

development. India has however managed to improve education with the implementation of policies such as free lunches for children at school.

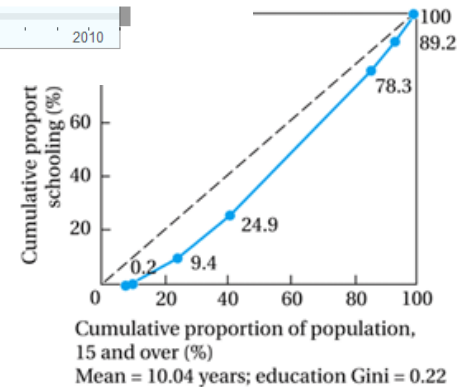
Lorenz Curves for education in India and South Korea¹⁶

Figure 4

Nonetheless there are still large discrepancies in the distribution of education in India as shown in the Lorenz curves in Figure 4. Over half of the population in 1990 received no education at all. South Korea on the other hand is much more equally distributed in terms of education. India has achieved industrialisation to a degree, but has failed to increase the quality of life for its people, as inequalities in poverty and education remain.



(a) Schooling in India



(b) Schooling in South Korea

¹⁵

http://www.google.co.uk/publicdata/explore?ds=kthk374hkr6tr_&hl=en&dl=en#ctype=l&strail=false&bcs=d&nselem=h&met_y=indicator_103106&scale_y=lin&ind_y=false&rdim=country&idim=country:9203:22003:22103:4103&fdim=country&hl=en&dl=en

¹⁶ Source; The Quality of Growth. 2000 World bank

South Korea Case Study

In the early days of development South Korea followed a trade protectionist approach to encourage domestic Industries to become efficient and develop technologies.

According to Kuznets (1994) there are four characteristics that were key to South Korea's Economic development; high investment rates, labour market competition, export orientation, and a strong interventionist government.

From the 1960s to the 1990s South Korea became one of the fastest growing developed countries in the world, this growth was largely assisted by official development assistance from the Organisation for Economic Co-operation and development in the 1980s. South Korea also relied on significant foreign direct investment to finance its industries. The government currently has measures in place to attract more FDI as part of the tax-revenue increasing program. It aims to attract USD 15bn worth of FDI in 2011, mostly from China, India and Russia (Country Report South Korea)¹⁷.

South Korea adopted an outward looking strategy in the 1960s, largely aided by government policies. Foreign direct investment was flooded into South Korea to supplement domestic savings to invest in labour-intensive manufactured products that would give South Korea a competitive advantage.

This resulted in rapid increases in the number of exports, as shown in figure 5 below where exports rose from 4% of GDP to make up around 50% of GDP in 2009.

South Korean manufacturing industries were highly efficient which allowed them to become competitive on a world level.

Figure 5¹⁸

¹⁷ http://overons.rabobank.com/content/images/South%20Korea-201109_tcm64-82346.pdf

¹⁸

http://www.google.co.uk/publicdata/explore?ds=d5bncppjof8f9_&met_y=ny_gdp_mktp_cd&idim=country:GBR&dl=en&hl=en&q=gdp+in+uk#ctype=l&strail=false&bcs=d&nselm=h&met_y=ne_exp_gnfs_zs&scale_y=lin&ind_y=false&rdim=country&idim=country:KOR&ifdim=country&hl=en&dl=en



The export orientated approach however did lead to income disparity between industrial and agricultural sectors which has not been resolved despite Government efforts.

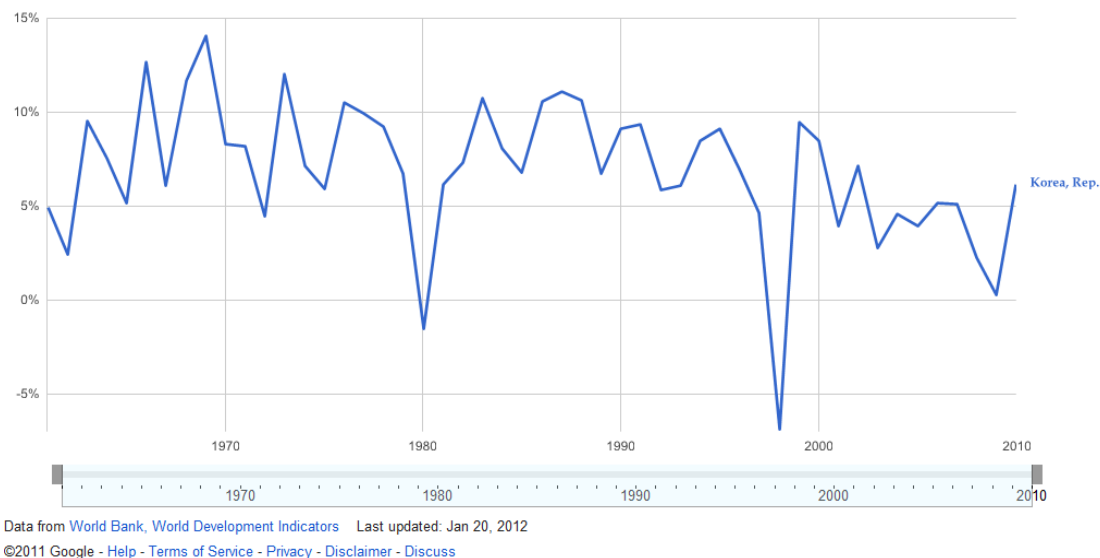


Figure 6¹⁹

Figure 6 illustrates the percentage change in real GDP yearly. Because of its maintenance of high growth rates South Korea was termed an Asian Tiger along with Hong Kong, Taiwan and Singapore. In the late 1990's South Korea was hit by the Asian financial crisis this caused GDP growth to drop from 9.17% to – 6.85% from 1995 to 1998 before recovery in 1999.

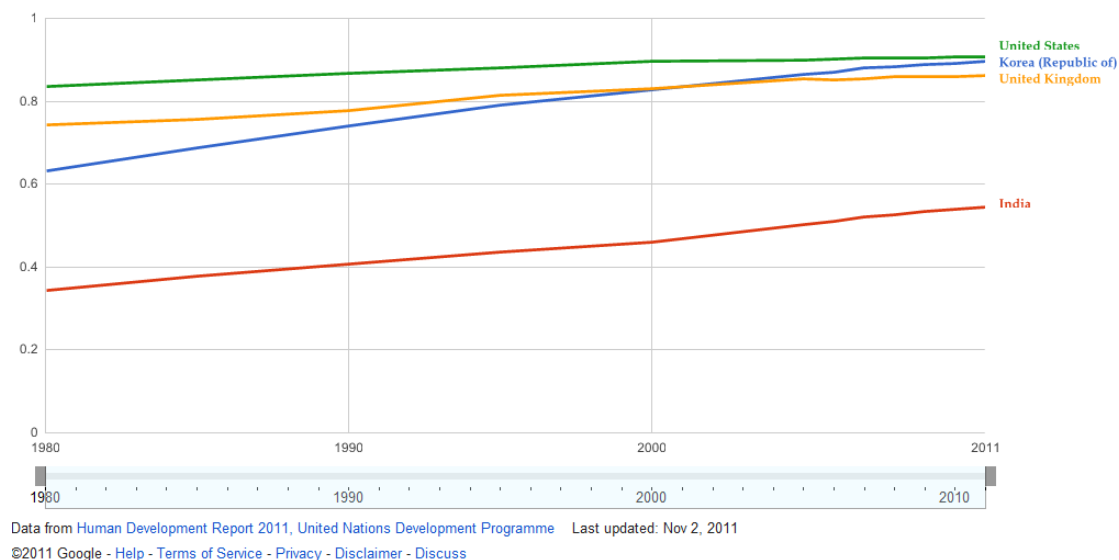


Figure 7²⁰

South Korea has been successful in increasing its Human Development Index and ranks high with Countries such as the UK and the US. Young people in South Korea are more likely to have achieved an upper secondary education than anywhere else in the developed world. The distribution of education is also equal as shown in figure 4 previously. Young people in South Korea are also among the most likely to have university degrees, (annual education report 2005 OECD)²¹.

²⁰

http://www.google.co.uk/publicdata/explore?ds=kthk374hkr6tr_&ctype=l&met_y=indicator_103106&hl=en&dl=en#ctype=l&strail=false&bcs=d&nselm=h&met_y=indicator_103106&scale_y=lin&ind_y=false&rdim=country&idim=country:10703:22003:22103&ifdim=country&hl=en&dl=en

²¹ <http://news.bbc.co.uk/1/hi/education/4240668.stm>

South Korea has successfully industrialised its economy, with high sustained growth alongside improvements in human development.

Conclusion

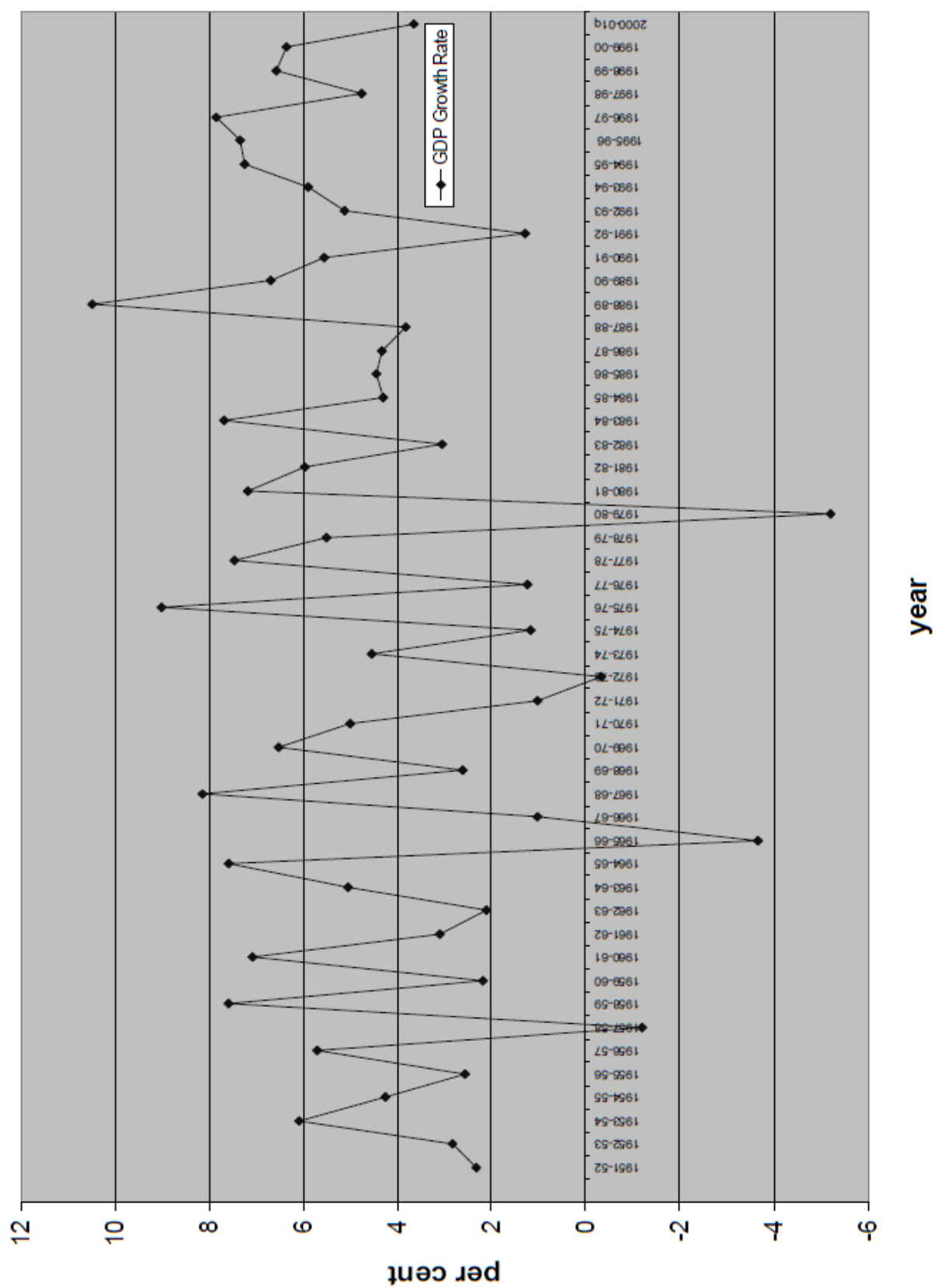
Although India and South Korea have both been successful in gaining economic growth, India's poor Human Development Index needs to be improved if it is to become as successful as South Korea in development as a whole. Improving education and healthcare is as fundamental to development as economic growth, otherwise problems such as slums and child labour will arise, or in India's case continue to exist.

South Korea on the other hand is highly dependant on its export industry and on foreign direct investment. This means it is susceptible to business cycle fluctuations and recessionary pressures in other countries such as the U.S and China which are some of South Korea's biggest importers.

The two case studies advocate for trade liberalisation over regulation and planning. Trade liberalisation reform led to higher rates of GDP growth in the 90s for India and the export orientated approach of South Korea led it to be ranked at 15th in the world by nominal GDP and become a high income developed country.

However ideally there should be some level of government intervention to attempt to alleviate problems such as child labour and mass migration to urban areas which may arise. The government can also assist industrialization in the allocation of subsidies and in the pursuit of foreign investment. A balance between a free market with some government intervention is the ideal approach to achieve industrialization.

Appendix



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