

**A Comparative Study Of  
Social Indicators and their  
Effect on Economic Development of India, China  
and South Korea**

*Dissertation submitted to the Jawaharlal Nehru University*

*In partial fulfillment of the requirements*

*For the award of the Degree of*

**MASTER OF PHILOSOPHY**

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**INDIA**

**2000**

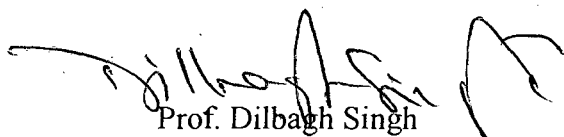


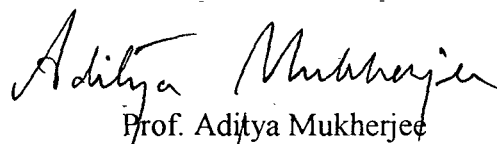
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CERTIFICATE

Certified that the dissertation entitled A Comparative Study of Social Indicators and their Effect on Economic Development of India, China and Korea submitted by Meera Malhan, is in partial fulfillment of the requirements for the award of the degree of Master of Philosophy of this University. This dissertation has not been submitted for any other degree of this University or of any other University and is her own work.

We recommend that this dissertation may be placed before the examiners for evaluation.

  
Prof. Dilbagh Singh  
(Chairperson)

  
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## CONTENTS

	Page
	ACKNOWLEDGEMENTS
	INTRODUCTION 1 - 11
CHAPTER-I	EDUCATION 12 - 78
CHAPTER-II	HEALTH 79 - 138
CHAPTER-III	PATTERN OF GROWTH FOLLOWED BY CHINA, SOUTH KOREA AND INDIA 139 - 184
	CONCLUSION 185 - 190
	BIBLIOGRAPHY 191 - 200

## ACKNOWLEDGEMENTS

*I would like to thank my supervisor Dr. Aditya Mukherjee, without whose invaluable guidance this dissertation would not have seen the light of day. I would also like to thank Dr. Neeladri Bhattacharya, without whose invaluable advice I would not have been able to complete my dissertation.*

*I thank the staff of the Library of National Institute of Public Finance and Policy, National Institute of Education Planning and Administration, Delhi University, Jawaharlal Nehru University, and Research and Information System Documentation Centre for non-aligned countries.*

*Finally, I would like to thank Mr. M.S.C. Kurup and my family for their encouragement and support at all moments.*



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*Place: New Delhi*

*Date: 28-07-2000*

## INTRODUCTION

India today is on the threshold of many far reaching changes. The aim to reach the status of a developed Nation is something, which most under developed countries of the world aspire. The problem is the path to be followed. At the time of Independence the task that Nehru identified remained unaccomplished to a considerable measure. There are indeed many areas of economic social development in which India's achievements have been quite acceptable. But success in the overall task identified by Nehru of ending poverty, ignorance, disease and inequality of opportunity has been quite limited. This problem seems more acute when one looks at other developing countries like South Korea that were in a comparable position to India not long ago but have surged ahead in recent years. This is not only the case with economic indicators but also with other social indicators like living condition, elementary education, nutrition etc.

The first question to be asked is how important are social indicators in achieving economic development? Second were we wrong in pursuing the path of economic development, with major emphasis on economic

indicator's that too placed in a socialist framework? Or was it the best path to follow at the time that we started our development?

These questions keep coming up and the answers remain complex, when we look at the more successful countries of the world today which have pursued very diverse economic policies from market oriented capitalism (S. Korea, Thailand, Taiwan) to communist party led socialism (Cuba, Vietnam, pre-reform China). As far as economic reforms are concerned, the achievements of these countries have been hugely different but if we look at the social indicators, they have been able to achieve a remarkable improvement in human conditions and human security. But are social indicators a necessary condition for economic growth? Or has economic growth been achieved at the expense of the basic social indicators? Why have social indicators become such an important part of all developmental planning?

There is, I feel a definite trend in most of the newly industrialized economics to indicate that the level of economic development that has been achieved, has been helped by the level of education of the people in the economy. Thus education becomes one of the most important social indicators which have to keep pace with the increase in the economic

indicators. This can be seen in South Korea and China. Though these are economies with diverse political set-ups, they have not only achieved phenomenal increases in economic indicators namely Gross National Product, National Income, Per Capita Income, terms of trade between agriculture and industry, but have also achieved substantial increases in education levels. By education level I mean:

1. Number of children that have enrolled in primary education.
2. The declining numbers of children dropping out between the age group of 0 – 4 years.
3. Adult literacy.
4. Female literacy.

The aim of some of these countries is to first achieve complete universalisation of primary education before emphasizing on secondary and tertiary levels of education. But along with primary levels of education, female and adult literacy programs are simultaneously emphasized. As the economy develops, it is assumed that this will help in furthering levels of education. But initially the emphasis on social indicators are independent of the effects that economic development has on the economy.

There are two divergent views, which are basic to the integration between education and economic development are:

1. The main function of a school system is to provide training facilities for the people to be employed in the production system and turn out trained people in numbers sufficient to meet the demands of the production system. Accordingly, education can be considered as one of the in-puts required for the production system, supply of which should be equated to the demand derived from the size of the production and the technology adopted for it. Thus according to this view the integration of the educational and the economic plan would be achieved if the education system is planned by working out the probable manpower requirements of the planned production system. This approach is known as the “Manpower requirements Approach”<sup>1</sup>.

2. The second view is that a given level of output presupposes the existence of a certain amount of education and thus it is argued that education shall be considered as a pre-requisite of production rather than a consequence flowing from it. There is a causal relationship between education & economic development. This is based on experience of countries like Japan & South Korea<sup>2</sup>.

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<sup>1</sup> M.V. Bhatawadekar “Integration of Educational and Integrated Plans”, *Economic and Political Weekly* (henceforth EPW), Special number July 1971, pp, 1641-1648. A Sameeksha Publication, Mumbai.

<sup>2</sup> M.V. Bhatawadekar “Integration of Educational Plans” *EPW*, Special Number July 1971, pp 1641-1648



Thus whether economic growth precedes or follows educational development is not certain. At this stage to categorically state that one precedes the other would be foolhardy. The path that different economies follow would depend on other factors like:

1. Role of state
2. Land reform; etc. to name a few.

The importance of education as a possible pre-requisite for development was realized only when the newly industrial economies had achieved dramatically high rates of economic growth in a fairly short period of time and their success stories were highlighted by numerous economists, historians and sociologists.

At the time of Independence, India had many tasks to accomplish, including the building of infrastructure for industry and agriculture. This required secondary, higher and technical education; a need that coincided with the interests and tendencies of the dominant middle classes, initially urban and "upper caste" but increasingly under the "democratic" pressure of the ballot box also rural and middle class / caste groups. Alva Myrdal, in her foundation day address at the Central Institute of Education in 1961

said that "education was not only a democratic right but also in the (not so) long run an economic requirement".

This was in 1961, but subsequently in the 70's one found that major policy programs like adult education and female literacy, which were started with such fervor, were given the back seat compared to emphasis on economic indicators. Though the percentages allocated by the center has almost remained the same, approximately (10per cent to total expenditure i.e. revenue and capital expenditure of Center, States and Union Territories)<sup>3</sup>, the distribution within this amount what has changed, is that in recent years, there has been a greater emphasis on primary education and higher enrolment figures, but an equal emphasis should be placed on adult literacy, female literacy and vocational educational systems.

Economic development cannot be judged merely in terms of income and output but should also take into account 'social variables'. Amongst the social variables, education and health are the two most important ones.

These two are not only important in increasing the economic development of a nation, but it also helps in increasing the freedom of a person which in turn further leads to the increase of various economic indicators. Some of the areas which improve because the freedom of an individual increases are:

1. Being educated and healthy is valuable achievements in themselves.
2. Increasing these two basic social indicators enhances the capability of an individual, which in turn can lead to an increase in his or her income.
3. Greater literacy can also dictate in society the type of social needs required. Thus enhancing the public services to meet the needs of the people.
4. It reduces the amount of child labour because the children are now at school. It eventually broadens the horizons of the younger generation making them more responsible citizens.

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<sup>3</sup> Tapas Kumar Sen "Public Expenditure on Human Development in India; Trends and Issues", in K.S.Parekh and Sudershan, eds, *Human Development and Structural Adjustment*, UNDP, Macmillan, 1993.

5. Better education also leads to a reduction in gender-based inequalities. The economies of scale which exist, in the betterment of social opportunities, available to an individual, has led to greater benefits resulting from increasing social awareness among its people; which in turn has increased the level of economic development of the country.

To realize the importance of Education and Health in all aspects of development I have attempted to compare the social indicators of South Korea and China with India. Along with social indicators, I have also taken the help of all the economic indicators. The reason being that though the improvement of all the social indicators are necessary in themselves, it is also important to gauge the effect that they have on various economic indicators.

I have attempted this by taking a comparison of the three economies to try and come to some type of conclusion as to the effect that these social indicators have had on the various development programmes of the economy. The reason that I have taken South Korea & China is because they are recent success stories in terms of development. South Korea started its spurt in development, in the sixties and has achieved remarkable development in almost all spheres, whether they are economic or social. The role of state played an important role in making these achievements possible.

started its spurt in development, in the sixties and has achieved remarkable development in almost all spheres, whether they are economic or social. The role of state played an important role in making these achievements possible.

Even in India the State played an important role in directing the economy on its path of development, but India's achievement is very limited compared to China and South Korea. One would like to have an insight as to what are the factors that led to latter's' phenomenal growth. Is it possible for these factors to be duplicated in a country like India?

The reason that I took China as the third country is because it was a late starter on the path of development. It too has a huge population. It made a conscious decision to allow liberalization, expansion of the market, allowing competitions in some fields in recent years, etc. The result being that it too achieved high rates of growth; growth being measured, through various economic indicators like gross national product, national income, per capita income etc. Clearly, the phenomenal development, that these economies have achieved are a result of the conscious policies followed by their governments. But did this growth get a boost because of the level of social indicators in the economy? Can we duplicate the level

of social indicators in an economy like India and achieve high rates of growth of various economic indicators? Did these economies have some already existing levels, which made the path of development easier? Did the help of certain existing structural factors smoothen the path of development? I feel that both the economies had a very strong base in the levels of social indicators and this along with the realistic policies followed by the government led to a quick path of development. To say that India along with all these three countries were at the same level, at the time they started their development process would be incorrect. They might have been at the same level with respect to economic indicators, but to say the same for social indicators would be false. This is what I would try an attempt and to do in my first chapter. Here I would attempt to look at education in the three economies, at the time of development and then see how the economy has developed. What effect has development had on education and then how important is the issue of female literacy to the level of development in the economy. As India is a vast country I would try and take up some regions to prove or disprove the point that could come up for analysis.

The second chapter would attempt a look at health in all the three economies under consideration and again try and answer some of the

questions, which have been posed above. In this case the causal and resulting factors would be looked into in greater detail. As the government is at the helm in all the three countries in deciding the path of development that the country should take an attempt would also be made to look into the policies of the government regarding the amount of expenditure that the government has earmarked for Health. Is it different in all the three countries? At the time of development, were, the level of all these social indicators different? The question that comes to one's mind is that the level of development that has been attained by these economies were a result of certain factors, but was it that amongst those factors the extent of improvement and the level of education and health paved and smoothed the path of development.

Thus the final chapter will try an attempt to bring into focus the economic indicators and the social indicators and may attempt to explain the relationship between all these for all the three countries in question.

# **Chapter - I**

## **Education**

The World Bank, under the heading Human Development Report, initiated the definition of Human Development index, in the year 1990. This report is published yearly since then. The Human Development index as defined by this report takes into account:

- 1) Life Expectancy
- 2) Adult Literacy
- 3) The purchasing power to buy commodities for satisfying basic needs

They have emphasized the importance of human development index and have stated that:<sup>4</sup>

1. It is wrong to suggest that the development process has failed in most developing countries in the last 3 decades.
2. It is wrong to suggest that economic growth is unnecessary for human development
3. It is conceptually and practically wrong to regard poverty alleviation as a goal distinct from Human Development.

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<sup>4</sup>UNDP, *Human Development Report* (henceforth HDR), Oxford University Press, New York, 1990.



4. It is wrong to insist that markets alone can define pattern of economic growth and Human Development.
5. It is wrong to suggest that developing countries do not have sufficient resources to take care of their Human Development goals.

The index used in the NCAER working paper 52 is the physical quantity of life index. This is based on 3 indicators<sup>5</sup>.

1. Infant Mortality
2. Life expectancy at age one
3. Adult Literacy rate

It was in 1996 HDR that further categories were added, like<sup>6</sup>:

1. Health
2. Education
3. Food and Nutrition
4. Income and Poverty

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<sup>5</sup> G. Chakraborty and S.P.Pal "Human Development Profile of the Indian States, 1995, National Council of Applied Economic Research, (henceforth NCAER) working Paper 52.

<sup>6</sup> HDR New York 1996

5. Women
6. Children
7. Environment
8. Politics and Conflicts

Besides HDR, there is also the Capability Poverty Measures (CPM)<sup>7</sup>. For example in India 229 million were identified as income poor, but more than twice as many i.e. 554 million were capability poor. Capability poor results from a lack of opportunity, such as lack of access to basic health services while at the same time levels of income are increasing. The objective of national planning and macro economic restructuring as a part of Human Development is possible only through adequate investment and the provision of efficient services, in priority social sectors such as education, primary health care, and child nutrition.

According to Dreze and Sen, it is possible to distinguish between two contrasting approaches to poverty alleviation<sup>8</sup>. One approach is to promote economic growth. This would not only enable the population

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<sup>7</sup> Jean Dreze and Amartya Sen, *India Economic Development and Social Opportunity*, pp 9-16, Oxford University Press, Delhi 1995.

<sup>8</sup> *ibid.*,

to take advantage, of the penetration released by greater general affluence but would provide an improved basis for public support. This is called the strategy of growth mediation security. The alternative approach called support led consists of resorting, to direct public support in the areas such as employment provision, income redistribution, health care education and social assistance, so that unequal distribution of incomes may be removed, without waiting for an improvement in the general level of affluence. But several interconnections between the two routes have to be recognized in order to avoid a fake total dichotomy. Dreze and Sen and Ravallien<sup>9</sup> (1993) carry the analysis forward and provide further insights by identifying those routes, that link Human Development and aggregate affluence. These are:

1. Capability expansion through economic growth
2. Capability expansion through poverty reduction
3. Capability expansion through social services

Dreze and Sen, maintain that the first route belongs to the category of growth led security, whereas the other two could be considered as

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<sup>9</sup> M.Ravallion and K.Subbarao, "Adjustment and Human Development in India", *Journal of the Indian School of Political Economy*, January –March 1992.

distinct components of support led growth. The distinction between these two components is necessary, as one is aimed at raising the income levels of individuals whereas the other is intended to raise capabilities in terms of education and health, which may not get translated into higher incomes.

According to S. Chakravorty<sup>10</sup>, since early 1970's there have been certain assumptions of the effects of planning, these are: 1) the assumption that the trickle down effect would percolate to all segments of the population if there is a fairly high degree of homogeneity and mobility among the population, both spatially and socially, (ii) an increase in physical capital formation by itself, can not ensure rapid economic growth unless it is supplemented by an increase in human capital formation, (iii) public policies which increase the consumption of the poor, can simultaneously promote equity and growth. Public expenditure on basic education, imparting of skills, nutrition, health and medical facilities, does provide direct consumption benefit to the poor but it should be regarded more as an instrument in human capital, in so far as it enables improvement in the

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<sup>10</sup>Sukhamoy Chakravarty, "Development Experience in South Asia", *Asian Development Report* (henceforth ADR), Volume 6, 1988-1989.

production capacity and thereby contributes to growth, (iv) poverty and population growth are interrelated to a large extent.

It has been observed that elements of Human Development such as expansion of health & medical facilities, improvement in literacy rates and educational levels have not only helped in reducing the incidence of poverty, but it has also helped in reducing the growth in population through reduced levels of fertility over a period of time. All these elements are closely related and improvement in any one area can facilitate improvement in other areas and reinforce the growth process.

## FEMALE LITERACY

Looking at the trends in female literacy in India, we have the following table:

### Trends in Male and Female Literacy\* (per cent) in India.

Years	Males	Females
1951	25.0	7.9
1961	34.4	13.0
1971	39.5	18.7
1981	46.9	24.8
1991	64.0	39.0
1997	73.0	50.0

\* The literacy rates are a percentage of literates to total population, inclusive of population in the age group 0-4 years.

(Source: Basic statistics All India States August-September 1986.

Center for monitoring Indian Economy henceforth CMIE)

In the fifties and sixties one finds that the female literacy rates are much less than half as compared to male literacy rates, about half in the seventies and eighties and nearly three-fourth's in the nineties. The

female literacy rates are catching up with the male literacy rates over the years.

At the All India level about 7.8 per cent and 15.1 per cent of girls who had taken admission in the year 1989-90 dropped out from the system before they reached grade II. Retention rate at the primary level was 66.45 per cent for boys and 56.41 per cent for girls in 1989-1990 as compared to 41.89 and 34.87 per cent respectively at the elementary level in 1994<sup>11</sup>, i.e. 58 per cent of boys and 65 per cent of girls dropped out. This is the single largest factor responsible for non-fulfillment of the goal of universalisation of primary education in the country.

Over the years the share of girls' enrollment to total enrollment at the primary education level improved significantly from 28.1 per cent in 1950-51 to 43.2 per cent in 1995-96<sup>12</sup>. This is a far cry from what should have been achieved. Gender bias, still plays an important role. The emphasis is greater on education of boys, rather than girls. We see that over the years the gender bias in the growth of enrolment of primary level

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<sup>11</sup> Arun Mehta, "Educational Development in India with Focus on Elementary Education", in Occasional Papers published by *National Institution of Education, Planning and Administration* (henceforth NIEPA) 1995

<sup>12</sup> *ibid.*,

has been systematically reduced in the (grade I – V) – An All India picture for the years 1951 to 1995 is shown below:

**Growth of Enrolment at Primary Level (Grade 1-V) All India 1951-1994) These figures are index numbers, first with 1950-1951 as base years then with 1986-87 as base year**

<b>Years</b>	<b>Total</b>	<b>Boys</b>	<b>Girls</b>
1950-51	100	100	100
1960-61	182.29	171.01	211.11
1970-71	296.87	258.70	394.44
1980-81	384.22	328.19	527.41
1986-87	453.80 (100)	374.49 (100)	656.48 (100)
1990-91	516.25 (113.76)	421.01 (112.42)	759.63(115.74)
1991-92	529.00 (116.58)	429.13 (114.59)	784.44 (119.53)
1992-93	548.80 (120.93)	438.04 (116.97)	831.85 (126.75)
1993-94	563.54 (124.18)	444.84 (119.54)	859.26 (131.00)

(Computed by Arun Mehta – Occasional Papers NIEPA) 1995



Besides progress at the elementary level, a significant progress has been made in the field of literacy, and continuing education, but like universal enrollment, the goal of universal literacy still remains elusive. From a low level of 18.33 per cent in 1951, literacy rates are only 52.21 per cent in 1991 census. Female literacy has increased from 8.86 per cent to 39.29 per cent during the same period<sup>13</sup>.

The reasons cited for not going to school in the age group 6-11 years were (i) that schooling facilities were not available to them (ii) lack of interest in studies and/or further studies, (iii) that they were busy attending to domestic chores, (iv) failure in their grade and (v) the employment of children.



Taking point no.5, we find that a smaller percentage of children, in the age group 6-11 years and a larger percentage of children in the age group 11-14 years were self employed, or employed as casual laborers. Out of this group, both in the rural and urban areas it was the poorest household which were the largest source of this type of child labour. Indicating thus that supplementing parent's income could be one of the major reasons for high drop out rates, and for the country not achieving the goal of universal literacy. Poor and

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<sup>13</sup> *ibid.*,

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sometimes virtually non-existent education systems, it has been observed, could be an important factor in the high drop out rates rather than poverty and need for supplementing family income.

The growth rates over a period of time reveal, that both at the primary and middle levels of education, a large number of girls joined the education system but due to low retention and/or high drop out rates did not remain in the system.

Also what has been seen is that the accessibility of schools, both in terms of population coverage, as well as overall distances is characterized by significant inter district variation. Areas predominantly populated by the scheduled castes and schedules tribes are at a comparative disadvantage compared to even those areas, which are underdeveloped. Thus both physical and social features play their role in determining the pattern of accessibility to whatever type of schooling that exists.

The core to a large number of problems that the economy is facing, I feel lies in the incomplete universalisation of education as far as the girl child is concerned. Here I do not want to prove a direct causal

relationship between the education of girls and the increasing amount of growth in the economy. This increasing quantity of growth, being indicated by higher levels of almost all economic indicators. But, yes the girl child is one of the most important links in achieving growth in the social indicators of the economy.

As far as female schooling is concerned there are three types of school where a distinction has to be made<sup>14</sup>.

1. The first type is Religious Schooling. Largely several Muslim households, who prefer to impart religious educations to their wards, use these types of schools. Such schools do impart literacy, but their content tends to be very narrow and socially conservative.
2. Second, there is a distinction between private and state run institutions. Here the difference is more pronounced in urban areas than rural areas. In the Government or state run schools very often the education that is imparted is based on what the local government wants to impart. All political parties are committed to a better status of women, though the degree of equality envisaged

for women, vis-à-vis men, varies. Private and state run schools differ to a large extent especially in urban areas. State schools normally impart education in the local language while for most private schools on the other hand the medium of instruction is English. Knowledge imparted by 'Western schools' or private schools are geared towards training girls in becoming more effective and efficient wives. The government schools suffer from lack of funds; they are also increasingly politicized in the content of the lessons they try to teach.

2. The third type of school is the one, which imparts Adult Literacy. Here the aim is to provide a basic functional literacy rather than an academic education. The distinction between the two being, that a functional education enables a person to read, write and sign one's name, it need not help in training one to pick up a job, or enable one to get a degree for what one has studied. The academic type of education on the other hand does play an important role in the type of job that one hopes to get. It also gets one a degree at the end of the time that one has studied.

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<sup>14</sup> Alaka Basu “, Girls Schooling, Autonomy and Fertility Change”, in Roger Jeffery and Alaka Basu eds, *Girls Schooling, Women Autonomy and Fertility Change in South Asia*, Sage Publications, New Delhi, 1996.

The other question that one has to look into is whether female education – whether academic or functional does help in achieving female autonomy.

Female autonomy is limited by (i) custom (ii) absence of financial means, absence of information and the physical means to exercise control and (iii) the authority of resistance to other individuals.

Sen says “the issue of equality immediately arises as a supplement to the assertion, of the importance of liberty i.e. the happiest form of female autonomy is one which raises female freedom to levels similar to that of males, without surpassing them or ending up merely replacing one system of absolute authority with another”<sup>15</sup>. During the prime reproductive years, female power is the lowest, it increases with age – it is maximum as a mother in law. The relevant type of autonomy that one is concerned with is the autonomy to make decisions on matters directly affecting the demand for and supply of children.

According to Sen, we should be concerned not only with the functioning that each individual achieves, but also with the set of function available to

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<sup>15</sup> Jean Dreze and Amartya Sen, *India Economic Development and Social Opportunity*, OUP, Delhi, 1995, 140-178.

each individual from which he makes a choice i.e. his 'capability set'<sup>16</sup>. Potential freedom is as important as actualized freedom. The value of schooling increases true autonomy; it provides information, develops knowledge, about how to acquire information and inculcates the ability to correctly use this information.

The notion of capability is essentially a mix of the following kinds<sup>17</sup>.

1. The degree of freedom in decision-making.
2. The number & domains over which such decision making powers can be exercised.
3. The extent of influence on other acknowledged decision makers.
4. The extent of ability to make informal decision.
5. The extent of gender equality in decision making in particular, and welfare in general.

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<sup>16</sup> J.Dreze and A.Sen *India Economic Development and Social Opportunity*, pp5-26, OUP, Delhi ,1995

<sup>17</sup> *ibid.*,

## AUTONOMY OF WOMEN

If we look at the effect that schooling has on the autonomy of women, one sees that education does seem a powerful tool in increasing the ability to influence other's decisions. Other family members are keenly aware of the educated women's stronger bargaining position, and often even superior knowledge and more willing to concede her some freedom.

Schooling has increased the receptivity of new information and the ease with which information is obtained and used.

The following table gives a state-wise comparison of Primary Gross enrollment, Rates, Drop out rates and Adult Literacy Rates for major Indian States by Gender:

**State Wise Comparison of Primary Gross Enrollment Ratios (GER)\*  
Drop Out Rates and Adult Literacy Rates for Major Indian States by  
Gender ( 1991):**

State	GER	Male Drop outper cent	Literacy	GER	Female Drop out	Literacy	Rural Poverty
Andhra Pradesh	116	42	55	100	42	33	33.8
Bihar	96	62	52	54	66	23	42.7
Gujarat	131	42	73	106	51	49	21.2
Haryana	110	02	69	95	07	40	11.7
Karnataka	124	37	67	115	44	44	35.9
Kerala	104	0	94	99	0	86	16.4
Madhya Pradesh	117	23	58	91	35	29	41.5
Orissa	117	53	63	78	52	35	48.3
Punjab	93	21	66	88	23	50	7.2
Rajasthan	120	35	55	61	56	20	26.0
Tamilnadu	149	16	74	141	18	51	39.5
Uttar Pradesh	104	20	56	73	20	25	37.2
West Bengal	125	36	68	123	46	47	30.3

\*The ratio of literate boys to literate girls.

Source: Government of India, Department of Education, GER and drop out data are for 1993; literacy rates are from the 1991 census.



If we look at States like Kerala and Tamil Nadu where the female literacy in Kerala is 86 per cent, the rural poverty is 16.4 per cent, while in Tamil Nadu the female literacy is 51 per cent and the poverty is 39.5 per cent. While on the other hand in Punjab, where the female literacy is 50 per cent the poverty is 7.2 per cent so also in Haryana where the female literacy is 40 per cent and the poverty is 11.7 per cent. (Source: Government of India, Department of Education. Literacy rates are from 1991 census). On the other hand if we look at States like Bihar, Orissa and Madhya Pradesh where the female literacy is 23 per cent, 35 per cent and 29 per cent respectively, the poverty rates are 42.7 per cent, 48.3 per cent and 41.5 per cent.

Thus we see that there is no clear correlation between female literacy and levels of poverty. Some states with low poverty levels nevertheless do not have very high levels of female literacy while some states with very high levels of female literacy do not have low levels of poverty

## DROP OUT RATE

The other aspect that one has to look at is the drop out rates. These also can be seen from the table given above. It comes out quite clearly that in a state like Kerala which in 1993 had achieved 80 per cent literacy rate, the female drop out rate was zero, while in Tamil Nadu the female drop out rate was 18 per cent, in Rajasthan it was 56 per cent and in Bihar 66 per cent. Completion rates decrease substantially from 100 per cent in Kerala and 84 per cent in Tamil Nadu to 40 per cent in Bihar. What clearly comes out of this analysis is that in whichever state the female literacy rate is high, the completion rate is also high.

One of the directive principles of the Constitution (Article 45) urges the states to provide free and compulsory education up to the age of 14 years by 1960, till today compulsory education has not been implemented everywhere in India. A good example of what can be achieved on the basis of sustained expansion of the quantity and quality of schooling facilities is provided by Himachal Pradesh where literacy rates were 21 per cent for males and 9 per cent for females in the 60's but by 1987-88, literacy rates in the 10-14 age group, had risen to as high as 95 per cent for males and 81 per cent for females in

the rural areas. The strong commitment of the state government and community institutions in ensuring a rapid expansion and improvement of schooling facilities has played a major role in its success. The per capita government expenditure on education in Himachal Pradesh is about twice as high as the All India average. The teacher population rate is also twice as high as the national average.

Some of the reasons given for the low enrolment and high drop out rates among the States are;

1. The high opportunity cost of children going to school, which is twice in terms of foregone earning.
2. Lack of interest in education, this is a direct function to the quality of teaching.
3. In some States education has been considered important for the lower class
4. Economic dependence of groups like widows, on child labour

Thus there are various socio, economic, political and cultural factors which are responsible for the high drop out rates.

It is here that the third type of schooling, namely adult education could have played an important role. The emphasis on adult education that existed at the time of independence, if it had continued in the same vein and with the same fervor, we would have achieved low drop out rates at the primary level<sup>18</sup>. It would have resulted in a high percentage of educated male and female adults, leading to a better environment, resulting in a trickle down effect, leading to lower drop out rates in various States.

Rates of growth of population and the literacy rate of various States;

**Rates of Growth of Population and the Literacy Rates of various States**

States	Annual Rate of Population (1981-91)	per cent Of literacy rate, age 7+, Year 1991	
		Female	Male
Haryana	2.45	40.5	69.1
Himachal Pradesh	1.85	32.1	75.1
Kerala	1.53	86.2	93.6
Punjab	1.91	50.4	65.7
Tamil Nadu	1.44	51.3	73.8
Uttar Pradesh	2.3	25.3	55.7
West Bengal	2.23	46.6	67.8
All India	2.14	39.3	64.1

Source: census document 1991.

<sup>18</sup>A. Basu , “ Maternal Schooling and Fertility”, in A.Basu and R.Jeffery eds, *Girls Schooling, Womens 'Autonomy and fertility change in S.Asia*, Sage Publications,New Delhi,1996.

From the table above it is quite apparent, that the states that have achieved, high female literacy rates e.g. Kerala, Tamilnadu, HimachalPradesh, Punjab, have also been able to achieve lower rates of growth of population. While in states like, Uttar Pradesh, Haryana, and West Bengal the inverse is the case.

### **EFFECT OF POPULATION GROWTH RATES AND OTHER ECONOMIC INDICATORS**

Now comparing the various indicators of the three countries i.e. India, China & South Korea, one knows for a fact that rapid increases in population, dilute the effect of growth in Income to a greater degree than slower increases in population. All developing countries in the region with per capita income exceeding US\$ 2000 e.g. the Republic of Korea have achieved a substantial degree of success in lowering their population growth rates. Further decreases in a country's population growth rate is obviously linked with success in family planning, which in turn is linked to the percentage of women in the child bearing age practicing contraceptive, the latter being linked to average level of education attainment among women.

To improve the quality of life in the Asian & Pacific developing countries, per capita income must be increased not only through reducing the rate at which population expands but also by increasing the rate of growth of GDP. A key factor in increasing the GDP growth rate is the productivity of investment.

The low quality of life that is the result of inefficient investment is exemplified by India's present economic situation. After 40 years of independence, the adult literacy rates (female/male) was 39/46 in 1991 (in India the 7+ literacy rate is usually higher than the 15+ literacy rates <sup>19</sup>). If the emphasis had been on Human Resource Development then the three sectors which had a low incremental capital-output ratios would have led to strong employment generating effects, the rate of growth of GDP would have been higher, the population growth rate and unemployment rate lower, and the poor would have had more purchasing power. Major strides might also have been made in reducing absolute poverty and hunger.

Most of the rapidly developing economies (e.g. Republic of Korea) have, poor natural resources, while India, which has invested massive

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<sup>19</sup> *World Development Report 1993*, tables 1 and 28, and *Human Development Report 1994*.

resources in its mineral industries, has a far lower per capita income than these countries. Thus other things being equal, heavy investment

In the exploitation and processing of minerals, even when a country is well endowed with such resources, is likely to raise the overall incremental capital output ratio, and lower the productivity of investment, thereby lowering the rate of growth of income and employment.

The Rate of Growth per Capita for 1991 for People's Republic of China (PRC) and Republic of Korea (ROK) is given below:

**Rate of Growth per Capita for 1991 for PRC and ROK**

Country	Average ROG Per Capita
Peoples Republic of China	4.8per cent
Republic of Korea	6.6per cent

Source: World Bank Publication World Development Report - New York.1993.

Looking at the correlation between Per Capita Income and Literacy:

**Correlation between Per Capita Income and Literacy for ROK, PRC  
and India**

Country	PCY – 1985 (US\$)	Rate of Literacy (per cent)
Republic of Korea	2150	96
Peoples Republic of China	310	69
India	270	36

[Source: World Bank Publication: World Development Report 1987]

The above table indicates a strong relationship between per capita income levels and levels of literacy: the higher the levels of income the higher the literacy rates.

**KOREA**

Taking the case of Korea, which has achieved highest Per Capita Income amongst the three mentioned countries, in the table above, we see that in 1960 when Korea was liberated from Japanese colonial rule, at that time the rate of growth was, 4.2 per cent during the period 1953-62. By contrast the economy has been hovering at over 10 per cent during the period after 1962. The main reason for this difference



was the leadership commitment to economic growth. When the Korean Government started on its path of development in the early 1960s<sup>20</sup>.

- i) The Government was not only a growth promoting catalyst, breaking serious bottlenecks for the private sector but also an entrepreneurial and/or managerial substitute in the areas where private initiatives were most lacking. This resulted in large public enterprises activities in the manufacturing sector of the country.

The phenomenal increase in the growth rate of the Korean economy has not been based on the fact that it is absolutely endowed with natural resources like some oil rich countries of the Middle East are, Korea's growth strategy on the other hand has been outward looking, and its growth has been export led.

During 1965-75, the GDP of the Korean economy increased at the annual rate of over 10 per cent while

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<sup>20</sup> Alice Amsden and Yoon Dae Euh . "Republic of Korea's Financial Reforms. What are the lessons"? *United Nations Conference on Trade and Development discussion papers*, November 30th, 1990.

between 1965 & 1970 the manufacturing sector grew at 22.4 per cent annually.

During the initial stage, the immediate technical task was, the implementation of transferred foreign technology in order to produce products, where technology and market had been tested and proven elsewhere. The government policy was a major influence in two ways, first the transfer of foreign technology, establishing the industry, occurred when the government implemented import substitution and market protection policies and second, various government programmes were also perceived as important stimulus for technical change by industry. Multinational firms played an important role in establishing the industry as suppliers of technology, technical personnel, capital, equipment, and component parts.

Taking the Korean experience in achieving such high rate of growth, we see that one important source of

productivity growth is capital accumulation<sup>21</sup>. All countries with rapid growth of real GNP have high savings rates. Korea is a good example of this fact. The savings rate was 20 per cent in 1960. Indian savings rate are in the region of 23 – 25 per cent and has been so for a very long time and it is being sustained at these levels. But this has not led to India reaching high growth rates, as has been the case of South Korea. So obviously there is much more than just savings rate, which lead to high rates of growth.

- 2 The second important source of productivity growth is the introduction of new technology.
- 3 The third is the improvement in education, skills and experience of labour force.

Thus retracing the steps that have been taken by South Korea, in achieving high rates of growth after the sixties, one of the factors that has

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<sup>21</sup> Chang Ha Joon, *Crisis of Capital Accumulation in South Korea (1979-1982) An Analysis of Policy Solutions*, Unpublished, M.Phil thesis in Economics and Politics of Development, Seoul University, South Korea, Personal collection of Prof. S. Chakravarty, Delhi University Library.

played an important role; is the third one namely improvement in education.

### **EMPHASIS ON EDUCATION**

Economic development in Korea is accompanied by massive shifts of human and other resources from the agriculture sector, to manufacturing and services sectors. Movement between sectors tends to produce rural to urban migration. The movement of labour out of agriculture has been extremely rapid in Korea since the early 1960's. Employment in agriculture declined from 63.1 per cent of total employment in 1963 to 41.8 per cent in 1977. During this period manufacturing employment rose from 8 per cent to 21.6 per cent. Korea is characterized by high population density, low resource endowment and use of high technology in the modernization of the economy. After adopting the export oriented growth strategy, the commitment of the Korean government to the export promotion strategy was so complete that virtually all policies were judged in the light of these implications. The export drive when active industrialization started in the early 1960's: the first stage was that import substitution industries were transformed into later stage export industries. The government provided export industries with various incentives, and strongly protected the domestic market from the dominant foreign firms.

Dr Amsden<sup>22</sup> argues that direct intervention and subsidies have always played a crucial role in Korean's economic policy. In, conjunction with a highly politicized process of industrial licensing and long term credit allocation, subsidies have been used to guide economic behavior, export targeting, and providing the Government with a device to discipline subsidy recipients. It is true that Korea has relied on the foreign markets to absorb its exports and it has also used the market mechanism to render certain conditions to discipline firms. It has never used market mechanism as a rule of thumb.

Under the Park Regime i.e. the period between 1962-71, heavy emphasis was placed on education. A highly educated population, made rapid diversification into new industries easier, and necessitated less reliance on direct foreign investment for technical know-how. The Park Regime labor policy featured a ban on strikes, barriers to free trade and union organization. The emphasis has been on, repression of labor leaders<sup>23</sup>.

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<sup>22</sup> Alice H. Amsden, *Republic of Korea: Stabilization and Adjustment Policies and Programmes*, Helsinki, 1989.

<sup>23</sup> Alice H Amsden. "*Wider Stabilization and Adjustment, Policies and Programmes. Country Study 14, Republic of Korea*", World Institution for Development Economic Research of the United Nations.

Prior to the 1960's South Korea had first to overcome the constraints imposed by the initial conditions. The 1950's can be regarded as a transition period during which many of these constraints were lifted and a platform for subsequent take off was prepared. The important areas in which these changes took place were in (i) land ownership, (ii) education, (iii) entrepreneurial capability, and (iv) institutions.

### **SYSTEM OF EDUCATION FROM EARLIER TIMES**

Taking the changes in education, first<sup>24</sup>: The Korean System of Education was originally based on the Confucian System of Education, where culture and Chinese philosophy was taught to the Korean people. This is similar to the type of Religious schools that a large amount of the Muslim population in India follow even till today though the content of education is vastly different. The main emphasis, on this type of education, in Korea was that working with one's own hands was not something to be looked down upon. Also, higher education or a highly educated person looked up to. Education was seen as the only way that one could move up in life. Education also emphasized the family as the basic unit, and

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24 Soo Kon Kim, Ae Won Kim, Chonsin Kim, "Human Resource Policy and Economic Development, Selected Countries Study", *Asian Development Bank*, Manila, Philippines, July 1990.

that service to the elders was seen as very important. All types of social and cultural values were inculcated through this system of education<sup>25</sup>.

This is very similar to the Indian System of Education where family ties are given prime importance and where family as a unit should be kept intact, where the elders are treated with respect, and where the son is a definite form of security. The Confucian philosophy also emphasized that a son was an important issue to have, for the same reasons as were prevalent in India. But what was different was that in the Confucian philosophy, the emphasis on Education, as a stepping-stone to improvement in the quality of life, made almost all the families save for the education of their children. This is seen quite clearly even today when one looks at the public expenditure on education. It is about the same amount as private expenditure on education. The total income that is earned by the individual is divided into major heads; and one of these heads is the education of children.

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<sup>25</sup> Sookon Kim ,Jae-Won Kim and ChonsunKim “ Human Resource Policy and Economic Development .Selected Country Studies .Republic of Korea” , *Asian Development Bank*, Manila, Philippines.

## EMPHASIS ON MASS EDUCATION<sup>26</sup>

The period of the fifties in Korea was also a period during which mass education was effectively carried out. This resulted in the reduction of the adult illiteracy rate from 78 per cent in 1945 to 28 per cent in 1960. Thus, by the early 1960's when the South Korean economy began its rapid industrialization, there was a ready pool of educated and easily trainable workers.

On the basis of careful examination of the Korean experience Kuznets (1977) tells us that according to rapid growth was possible after 1960's only because certain institutional or historical constraints were loosened by the reforms that had taken place earlier.

Building a platform for take off was a necessary condition for the macro economic policies to be effective, in bringing about rapid economic development. Thus in 1945 when the Korean peninsula was liberated from Japanese colonial rule, the country was left with widespread illiteracy and an ill-trained labor force. The partition of the peninsula deprived South Korea of most of the heavy and chemical industries, established during colonial rule. Immediately during the Korean War

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<sup>26</sup> Chung H Lee, *The Economic Transformation of South Korea, Lessons for the Transformation Economies*, Development Centre of the Organisation for economic Cooperation and Development, Development Center Studies, OECD, 1995.



and after, reconstruction and export substitution were restored, new industries were added, so that the country had a coherent economic structure by the early 1960's. Land reforms and the disruption of output that follows reform movement were completed by 1958. The new generation entering the Labour Force had more education and better job training than their predecessors.

Thus some of the lessons that are learnt from South Korea are, (i) that certain preconditions are necessary if macro economic policies are to be effective and (ii) for the economy to achieve high levels of economic development, the Government has to play an active role in resource allocation. The role of the government was greater than envisioned in neo classical economies.

In 1953 when the Korea war ended, the Korean economy consisted mostly of agriculture, fishery & forestry.

- **Demographic figures for South Korea (Total Population and Annual Growth)**

	1960	1992
Total Population (in Million)	10.8	22.6
Annual Growth (per cent)	2.3	1.7

- Source – Country Human Development Indicators 1994 UNDP

Human Development Report office New York.

## Employment

### Employment Figures for South Korea: A Comparative Study for 1965 and 1990-92

Labour Force (as percentage of total population)

	1965	1990-92
per cent of LF in Agriculture	57	43
per cent of LF in Industry	23	30
per cent of LF in Services	20	27
Women in LF (per cent of total LF)		46

Source: Country Human Development Indicators, UNDP 1994 Human development Report office New York.

In the 1960's less than 30 per cent of the population lived in urban areas. By 1990, 74 per cent were living in urban areas. Korea experienced rapid urban growth between 1965 and 1980, annual growth rate averaging 5.7 per cent. From 1980 to 1990 net urban population growth was 2.7 per cent annually. Urban poverty in the early stages of development was mainly due to large scale rural to urban migration. In the late seventies and eighties as the number of urban poor decreased with greater economic prosperity, the government's major policy concerns focused on

preventing the transmission of poverty from generation to generation, and improving the poor's ability to live solely on their own, through job training programmes and the opening up of more educational opportunities. As the figures below show poverty has been dramatically reduced in South Korea.

**Urban Poverty Levels for ROK for the years 1965 and 1984**

	1965	1984
Urban Poverty	54.9 per cent	4.6 per cent

\*Source: Major solutions of Korean Economy – Korea News Review 1986.

This has been achieved because of the adoption of labour intensive technology in the manufacturing sector<sup>27</sup>. As development takes place there is a shift from the amount of labour dependent on the agricultural sector. This excess amount of labour shifts out of the agricultural sector, into the manufacturing and services sectors. It is almost certain that there is a greater increase in employment in the services sector, rather than an

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<sup>27</sup> Dilip K Das, *Korean Economic Dynamism*, Macmillan, India 1988.

increase in employment in the manufacturing sector. Thus most of the decrease in labour force of the agriculture sector is absorbed by a faster increasing services sector. In the manufacturing sector, the emphasis was on export promotion which led to a greater demand for labour force, this in turn contributed to increases in employment opportunities, which benefited the urban poor. Korea's economic experience exemplifies the dual economic growth theory, which implies a progressive shift in labour forces from the low productivity, low income, and agricultural sector to the high productivity high income-manufacturing sector.

The centerpiece of Korea's anti poverty policy were (i) Livelihood protection program, (ii) Public Works Projects and Job Placement Services, (iii) Medical Assistance Program. All Medical Services are provided free of charge to the very poor who are unable to work, while those who can work pay 50 per cent of hospital expenses, (iv) Nutrition, Health and Family Planning Services, and (v) Education and training programmes. Primary schooling in Korea is now free and compulsory. Primary school in urban areas still requires informal costs, like schooling material and books. For middle school education tuition fee is waived for students from households below the poverty line.

## **ENROLMENT**

The rapidly growing East and South East Asian economies are often pointed out as examples in which a highly primary educated school going population has been an important tool, if not necessarily a pre-condition for their relatively rapid and equitable growth.

Comparing figures for China, Korea and India, in the table given below we see that South Korea had achieved high percentages in primary enrollment figures even in 1965 China achieved even higher rates, than Korea in 1987, while India had still to achieve figures which could be compared with South Korea and China. Thus primary enrollment figures could have a definite bearing on levels of economic growth of the economy.

**Percentage of Age Group Enrolled in Education: A Comparative Study of China, ROK and India.**

Country	Primary Total		Primary Female		Secondary				Tertiary (Higher ed) Total	
	1965	1987	1965	1987	Total		Female		1965	1987
					1965	1987	1965	1987		
China	89	132	-	124	24	43	-	37	1	2
Republic of Korea	101	101	99	101	35	85	25	86	6	36
India	74	98	57	81	27	39	13	37	85	

\*Source : World Bank: World Development Report 1989

**Looking at the Correlation between Per Capital Income and Literacy**

Country	PCY (1985) \$	Rate of Literacy per cent
Rep. Of Korea	2150	96
China Peoples Rep.	310	69
India	270	36

\*\* Source: World Bank: World Development Report 1998

**Figures for Secondary and Higher Education: 1984**

Country	Secondary Education			Higher Education Total
	Total	Male	Female	
Rep. Of Korea	91	94	81	26
China Peoples' Rep.	37	43	31	1
India	34	44	23	9

Source: World Bank; World Development Report, 1986

Out of the three countries compared above undoubtedly South Korea has achieved the maximum per capita income. The reason for this is many, but as we are concerned about the impact of education, we find that even in 1965 which, is the time of Korea's first year plan, the numbers enrolled in schools are the highest in South Korea. Taking the next 23 years one sees that the jump in the number of children enrolled in primary schools in China is about nearly 49 per cent while for the same period the increase in the case of India, is about 32 per cent. The figures that one starts from are different for both China and India. But the levels of enrollment in schools, achieved at the primary level are definitely much higher in the case of China than India.

Taking South Korea again, and if we look now at the percentage of illiterates and the percentage of population with some schooling we find

that in 1975 the number of illiterate females were higher than males, so is the case of males with some schooling, here too the figure was higher in the case of males than females .We can conclude that a gender bias did exist in South Korea in 1975.

**South Korea: Percentage of Illiterates and percentage of population with some schooling.**

Country	Year of Census	per cent of illiterate		per cent of population with some schooling	
		Male	Female	Male	Female
Republic of Korea	1975	5.6	19.0	83.7	66.5

\* Source: UNESCO – Statistical year Book (1956,81,82,83)



## EDUCATION KEEPING PACE WITH DEVELOPMENT

The educational system of Korea was radically transformed immediately after the 2<sup>nd</sup> World War<sup>28</sup>. The Education Law of 1949 established the new system of education, based on the U.S. experience. Today the regular school consists of 6 years of middle schooling, three years of high school, two years of junior college and 4-6 years of college or university education. The constitution guarantees every citizen equal educational opportunities according to his ability. This requires at least an elementary education for all children and provides for free compulsory education.

Looking at the Number of Educational Institutions, teachers and students for 3 years 1961, 1966 & 1972 we see that there has been a maximum increase in the number of primary institutions, number of teachers employed, and the number of students. Over the years there is also an increase in the number of middle schools as the number of students increase, resulting in, increased employment of teachers. This can be seen

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<sup>28</sup> Chung H Lee, *The Economic Transformation of South Korea. Lessons for the Transition Economies*, Development Center of the Organization for Economic Co-operation and Development, Development Center Studies .1994.

in the case of High School, Junior College and University, as the number of students increase so do the number of institutions and teachers.

**South Korea Number of Educational Institutions, Teachers and Students for three years 1961, 1966 and 1972**

Type of Educational Institution	No. Of Institutions			No. Of Teachers			No. Of students		
	1961	1966	1972	1961	1966	1972	1961	1966	1972
Elementary School	5264	5274	61978	63003	84927	105672	3834779	5165490	577588
Middle School	1073	1251	1866	11793*	19801	39888	620520	821997	168630
High School	621	735	943	6809(a)	14636	24506	211831	434820	729780
Junior College	37(a)	59	66	-	1456	1835	10598(a)	35686	36898
College & University	46(a)	69	69	-	5808	8949	114839(a)	131354	163390

\* Excluding Lecturers

\* The figures for April 1962

\*\* Source: Republic of Korea, Economic Planning Board, and Bureau of Statistics, Korea Statistical Year Book, 1963, 69, 73

In 1955 people who had never attended school constituted over 50 per cent of the total population. By 1970, this population declined to 21 per cent due to the educational policy followed by the state, which was in tandem with the rapid industrial development, taking place in the economy since the 1950's.

Also what has been happening is a narrowing down of the gap between males and females. This has primarily been achieved due to the rapid expansion of female education. In 1955, 31.4 per cent of males who were over 6 years of age had completed schooling, while for the same period the number of educated females were only 19 per cent. In 1970 the corresponding figures, for males and females were 52 and 46 per cent respectively.

Thus even in 1955, when South Korea's industrial development had just begun there was a base, whereby 31.4 per cent of the males had completed their schooling and 19 per cent of females had completed their schooling<sup>29</sup>. If, we look at the corresponding figures for India, we find that in 1981 literate male with matriculation or higher secondary level of education were 17.3 per cent and females with the same level of education was 12.5 per cent. The percentage of graduates and above for males for the year 1981 were 4.4 per cent and for females were 2.9 per cent.

Thus before Korea embarked on the path of industrial growth it had an educational base on which to lay its foundation. It had a work force

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<sup>29</sup> Chung H Lee, *The economic Transformation of S.Korea. Lessons for the transition Economies*, Development Centre of the Organization for Economic co-operation and Dev. Centre Studies, 1995.

whereby 31.4 per cent of males + 19 per cent of females i.e. about 50.4 per cent of the population had in the year 1955 completed their schooling. While for India in the year 1981 the corresponding figure is 29.8 per cent.

Thus, when the South Korean economy was ready to take off, it had at least half of the work force, which was educated. This made a lot of difference. The work force was able to accept the differences that the Korean economy was constantly under the supervision of a multi faceted and result oriented state. The effect of this has been an all round transformation which includes dynamic development of the productive forces, far reaching structural changes, dramatic development of sectors, like textile and apparel, electronics, semi conductors, cement, iron & steel, petrochemicals, machinery and transport, telecommunication, shipping, services and higher education, effective and speedy implementation of successive 5 year economic development plan targets, quantitative and qualitative rise in employment opportunities and significant changes in sectoral, gender and educational composition of employment of the labor force.

This I feel was possible because at the time of development, and at the time that the State decided to embark on the path of development some

level of education already existed, so that the receptiveness of the public to different development programmes could take place in an easy and smooth manner.

Further human Resource development can prove to be an effective strategy for reducing both population growth and the incidence of poverty<sup>30</sup>.

South Korea had laid sufficient emphasis on education, skill formation and material capital accumulation. The development of a strong upper primary schooling system in the Republic of Korea facilitated the process of demographic transition and thereby sustained economic growth.

The role of primary schooling was important in providing a basic level of literacy, knowledge of numerals and social cohesion in the period of early industrialization. High levels of basic education and literacy for males and females were available prior to take off.

As the economy grew, the movement from low technology, labour intensive production to more superior technology and higher value

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<sup>30</sup> SookenKim ,JaeWon Kim ,Chonsum Kim , “Human Resource Policy and Economic Development, Selected Country Studies”, *Asian Development Bank*, Republic of Korea, 1990.

production was accompanied by the quantitative improvement of both primary and secondary schooling. This process was accompanied by the expansion of vocational training and educational opportunity.

As the expansion process moved up so did the mobility towards higher and higher education i.e. the economy climbed up the ladder toward tertiary education. New opportunities were increasingly provided. These opportunities were funded privately.

The education system had been explicitly and overtly associated with the goal of fostering, social cohesion and political stability, this can be seen by the fact that the South Korean education system was egalitarian i.e. equal educational opportunities to all through the neighbourhood school system. The pathway that education has followed has served to minimize the conflict, which can arise when increased wealth is either not redistributed or is distributed according to manifestly unfair criteria.

Education may not have played the part of a primary source or engine of growth, it in fact performed a necessary function and had been essentially supportive, it, facilitated a range of roles in the process of development. In South Korea, education was used by the state to avert threats to its

stability. The State being such an important factor in the development of the economy, it was necessary that the education system developed in such a manner as to avoid any conflicts which could have arisen in the decisions, that the state took, and the path of development that the economy followed. Thus what is apparent is that the curriculum decided by the State, to be followed by the school was supportive of the actions that the State followed. It imparted education that stated that what the State was doing was good for the people. The State controlled any rebellion, if and when it took place, but the extent of such conflict was not too much as the education system had laid the base for an acceptance of the policies followed by the State.

## CHINA

Turning now to China, which in terms of economic indicators, and the political system was one whereby the influence of the State was extensive.

The Chinese system of education originally developed from the Confucian thought as Balazas states (1972)<sup>31</sup>. After much hesitation, the officials adopted the Confucianism doctrine as being the ideology that best expressed their way of life, in spite of preaching respect for others, justice and reciprocity, these virtues were only reserved for relations between educated people, whereas for the ordinary subject, the cardinal virtue was absolute obedience. Its unalterable aim was to maintain the status quo of the social hierarchy. Ancestor worship, divested of its earlier religious character, geared the social mechanism, regulating every detail of social relations. Respectfulness, humility, deference, docility, complete submission and subordination to elders and betters – these were the dominant features of the Confucian ethic that helped to cement the hierarchy, creating a patriarchal, paternalistic world, in which the gradations of rank, from the sovereign downward were marked by the

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<sup>31</sup> Victor D.Lippit, "*The Economic Development of China*", M.E. Sharpe, Inc. Armonk, New York/ London. An East Gate Book, 1987.



reciprocal relations of favour and obligation. Individual rights, initiative, and liberty were entirely lacking.

The similarity between the Confucian philosophy and the type of social structure that existed in India seems very similar in terms of social hierarchy and gender bias.

In China this type of Confucian ideology was hostile to the development of the scientific inquiry, it was consciously fostered 'to maintain the status quo' i.e. to perpetuate a system of privilege.

Classical education improved the status of an individual, and was completely integrated into the social structure, there was no space left for scientific or technical learning.

Any effort to change the content of education threatened to make obsolete the learning to which the members of the elite had devoted much of their lives, and to make obsolete as well the whole system of status on which their positions depended. Thus, the committed resistance of the elite to educational reform until the very end of the 19th Century can be easily understood.

The Peoples Republic of China was established in 1949, but the period unto 1952 was essentially one of rehabilitation of China's war torn economy. During the first five-year plan (1953-57) state and joint state private enterprises continued to grow in importance, relative to private ones, which disappeared by the end of the period.

#### CHANGE IN THE EDUCATION SYSTEM IN ACCORDANCE WITH CHANGES IN POLITICAL IDEOLOGY.

From 1958 to 1960 China attempted to bring about a "Great Leap forward" in economic output. From 1961 to 1965, China returned to a more conventional, less ideological based approach to economic development. Economic rather than political criteria were stressed and material incentives in both industry and agriculture received renewed emphasis, with income tied more closely to work performance.

In the mid 1960's<sup>32</sup>, Mao Zedong became increasingly concerned with some of the social tendencies that were becoming manifest during this period. He was especially concerned with the emergence of a

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<sup>32</sup> Alka Acharya, "Two Economies and After. Peoples Republic of China at 50", *Economic and Political Weekly*, October 9-15, 1999.

bureaucratic, technocratic, elite dominating in a rationalist organized society, in which ideology and solidarity would play secondary roles and the pursuit of individualism would be the primary reason in motivating economic and social activity. He launched the Great Proletarian Cultural Revolution in 1966. With the overall support of Mao, leadership in the Cultural Revolution was taken over by the so-called Gang of Four. Led by Jiang Qun, the wife of Mao Zedong and including Zhang Chunqiao, Yao Wenyan and Wang Hongwen, all of whom, were members of the Central Committee of the Communist Party, the Gang of Four tried to impose its own vision of socialist development upon the nation. They promoted the Cultural Revolution, whose emphasis was on equality, the mass line, eliminating the three great differences that existed between town and country, industry and agriculture and manual and intellectual work. The cultural revolution can be divided into two principal phases, a period of active factional conflict from 1966 to 1969, when masses of young people joined the red guards and were encouraged to criticize party and government leaders who followed the capitalist road. A period of consolidation followed until 1976 at that point of time Mao died and the Gang of Four were arrested. The egalitarian thrust of the Cultural Revolution benefited the peasant's vis-à-vis their urban worker counterparts. In education, examination as the basis for admission to

Universities was replaced by the recommendation of one's work unit, thus this too favored the peasants, who were at a severe disadvantage in examinations relative to urban residents.

The Chinese people found themselves cut off from their own traditional culture. In education, the enthusiasm put into reform – including the elimination of all examination, learning, learning was through practical activity and so forth, and the sharp attacks on intellectuals resulted in a generation deprived of the opportunity for serious study. Thus mathematicians who insisted on examining their students would be sent off to the countryside indefinitely to reflect on their sins and reform their thinking. Thus millions of people, were unjustly victimized by, the Cultural Revolution with no form of redress at the time.

Following the arrest of the Gang of Four at the end of 1976, China passed through a phase of struggle between “reformers” led by Deng Xiaoping and moderates led by Hua Guofeng. At the 3<sup>rd</sup> Plenum of the Eleventh Party Central Committee in Dec. 1978, the reformers won the reform agenda for industry, which encompassed many other elements as well. Improved professional qualifications for managers, including general education and managerial and technical training, increasingly replaced

political criteria as the basis for appointments at various levels. Throughout the country education received renewed emphasis.

The major changes in economic strategy that can be identified during the 1980's can be characterized as a move<sup>33</sup>, (1) from a socialist planned economy to a socialist commodity economy, (2) from the State control of production to greater autonomy for producers and (3) from a national economy, which is closed to one, which participates in the international economy.

### **THE IMPORTANCE OF EDUCATION**

The importance of accelerating the development of education was recognized since 1978. The achievement of the quadruple economic targets was thought to depend largely on the development of Science and Technology. In the 1980's the stock of qualified manpower fell short of what was needed, as a result of technological restructuring. The reform which took place in the economy and the education system interacted with each other. The former provided physical resources for education and created the conditions under which the restructuring of education

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<sup>33</sup> Keith M Lewis, Xu Hui, Angela W Little, Hong Jiwei, *Educational Innovation in China. Tracing the Impact of the 1985 Reform.*

could be undertaken. It also placed new demands on education and inevitably brought about corresponding reforms of education, which in turn served the economy, e.g. the decentralization of economic activity encouraged a reform of the enrolment planning of the institutions of higher education. Earlier student recruitment was planned.

Educational provision in pre 1949 China was meager by today's standards. In 1949 for every 10,000 people 3 enrolled in University, 38 students at the secondary level and 486 pupils at primary schools. More than 80per cent of the population was illiterate<sup>34</sup>. Since 1949, the illiteracy rate of 80per cent in the early post liberation years decreased to 23.5per cent i.e. by 56.5per cent till mid 60's. But during the years of the Cultural Revolution i.e. from 1966 to 1976 China's educational development slowed down.

The educational reforms of 1984<sup>35</sup> were to enhance national economic development and produce as many skilled people as possible. The reform document had a four-pronged strategy.

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<sup>34</sup> Alka Acharya, "Two Era's and After. Peoples Republic of China at 50", *Economic and Political Weekly* 9-15, 1999.

<sup>35</sup> Kieth M Lewis, Xu Hui, Angela W Little, Zheng Jiwei, "Educational Innovation in China. Tracing The Impact of the 1985 Reforms".

- (1) The development of a compulsory education for nine years at a stretch at the primary level, and the entrusting of responsibility of elementary education to local authorities.
- (2) Central and local government commitment to, educational purposes were, expected to increase at a rate faster than the increase in the State's, regular revenues. The average expenditure on education per student was also expected to increase steadily.
- (3) Promotion of vocational and technical education.
- (4) Reform of enrolment planning of the institutions of higher education, and of the system of job assignment on graduation, combined with an extension of the decision making power of institutions of higher education to take initiatives in serving economic and social development.

Looking at the effect that education had on the various economic goals of the government, one must keep in mind the political influence that China went through and the effect that it had on the education of the people and finally, the change in the educational levels after the 1980's that had a

direct bearing on the increase in the economic indicators of the economy. This should be then contrasted with South Korea and India. Finally, we must examine what India can learn from both South Korea and China.

All the three countries have very similar sociological backgrounds. China is more similar to India in terms of population – but the major difference between them is the type of political set up. The other factor which is common among the three of them is that all of them, were at some point in time or the other under imperial / colonial domination.



**ADULT LITERACY**

**Comparative Study of Adult Literacy Rates (percentages) by sex in  
1980-2000 between China and India:**

\* 1980

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	Percentage of Total Males	Percentage of Total Females
China	77.3	46.5
India	54.5	24.9

1990

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	Male	Female
China	87.0	68.1
India	61.8	33.7

2000 (Projected)

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	Male	Female
China	92.0	82.2
India	68.5	43.2

\*Source: World Education Report 1993 (UNESCO Publication)

According to the above table China would be able to achieve almost 100per cent adult literacy by the year 2000 and beyond. The other major

difference, which becomes apparent while comparing the two economies are, that the gender difference has continued to decline in the case of China – but this difference still seems to exist in the case of India. Korea on the other hand has achieved 100 per cent literacy rates. The question that comes to one's mind is regarding, the role of economic indicators on education. Are the various economic indicators in China responsible for the increasing literacy rates? Or, is it that the literacy rates were a help to China in achieving the high rates of growth, of various economic indicators. I feel that a given system of education is a help to achieve the level of development that the economy wants to achieve in terms of GDP, National Income etc and then the education system is given an impetus once these rates are achieved. Looking now at the primary enrolment figures for the two economies:

## ENROLLMENT FIGURES – A COMPARISON

### Gross enrollment rates at the primary level Education by Sex (1980 & 1990) for China and India.

\* GROSS ENROLMENT RATIO

	<u>1980</u>		<u>1990</u>	
	M	F	M	F
China	120.9	103.3	130.4	119.7
India	100.0	68.4	111.5	84.4

GROSS ENROLMENT RATIO per cent IN SECONDARY LEVELS OF EDUCATION BY SEX (1980 & 1990)

	1980		1990	
	M	F	M	F
China	54.0	37.5	54.0	41.9
India	40.0	20.3	54.3	32.5

GROSS ENROLMENT RATIO per cent in TERTIARY LEVEL EDUCATION BY SEX

	1980		1990	
	M	F	M	F
China	1.8	0.6	2.1	1.1
India	7.6	3.0	10.5	4.9

\* Source World Education Report 1993 (UNESCO PUBLICATION)

If one looks at the enrollment figures in the above table, and compares it with India the conclusion that is reached is that at the primary level the enrollment figures are much more in the case of China than in the case of India. As the level of development increased, there was a corresponding shift of emphasis from the first to the second and then the third level of education, in the case of both India and China. Though the gross enrolment figures in the case of China seem much higher, the numbers enrolled for secondary and tertiary levels are higher for India, indicating that there are much higher numbers enrolled at the primary levels in the case of China.

The economy as it moves on the path of development requires a minimum level of education, which is achieved at the primary level. But as the economy starts moving up the path of development, it is essential that the knowledge required by the people change, and with that, emphasis on what is required by the economy, in terms of skilled technical manpower. It is very essential that the emphasis should shift from just high primary enrollment numbers to higher levels of education in the form of technical and vocational expertise.

This is the type of path that South Korea had followed. The economy had adequately adapted to the quantity and type of skilled manpower that was required by the industrial sector.

This needed to be followed in the case of China and India. In both the economies Education is not only the prerogative of private sector so that the demands made on them, could be met by a free market economy, where the demand and supply conditions are adequately balanced. In a country like South Korea it is the State, which decides the path to follow, keeping in mind that it has to equate the country's demand and supply situation of skilled manpower resources, which is required by the economy, as industrialization takes place.

The high levels of literacy, in China, particularly at the primary levels, are, universally admitted, to have been due to the, measures adopted, and structures established in the 1950's and 60's<sup>36</sup>. China has the lowest number of people living under the poverty line in the developing world. The Maoist period saw the massive use of human capital for the creation of extensive infrastructure this was invaluable during the reform period.

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<sup>36</sup> Kieth M Lewis, Xu Hui, AngelaW Little *Educational Innovation in China. Tracing the Impact of 1985 Reforms.*

Even the critics of Maoist policies admit that the egalitarian goals in China were to a remarkable degree fulfilled. In 1940, almost a decade before the Peoples Republic Of China was born Mao had spelled out his thinking in his essay "On New Democracy". He had categorically stated that China needed a "new education" that this "new education" would have to be national, scientific and popular<sup>37</sup>. The national character of education was to consist, in promoting among the people feelings of pride and love towards the country and putting them, ever on guard against all manifestations of imperialist aggression. Education was also to be fully accessible to the masses i.e. it had to be popular as against the earlier system which helped to create a privileged urban elite.

The sociological similarity between the three countries as far as their attitude towards women are concerned is quite apparent. In India, the necessity of a male child, besides other economic reasons perpetuated the necessity to have a son, and give this child the best vis-à-vis the girl child. If one looks at China one finds a similar type of situation occurring whereby, the Chinese tradition was so unkind to women because of the ideology of Confucianism. Confucius advocated that "To maintain a distinction between men and women is a great principle of the country.

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<sup>37</sup> Victor Lippit, *The economic Development of China*. M. E. Sharpe, Inc. Armonk, New York/London An East Gate Book, 1987.

He advocated the “The Three Bonds” (San Kang) whereby (1) the ruler bends the subject (2) the father bends the son and (3) the husband bends the wife<sup>38</sup>. Later the Confucius prescribed more concrete norms for woman such as the “three obedience’s” ( san t’ sung)

- (1) obeying the father before marriage
- (2) obeying the husband after marriage and
- (3) obeying the son after death of the husband.

It was with the removal of the Kuomintang regime, which was the last Chinese Government to support Confucianism, a new era opened for Chinese women. The steps taken by the Peoples Republic of China Government in the last 25 years resulted in many social changes. The first was the change in Chinese women’s mental outlook, and in society’s conception of womanhood. The second was the mass participation of woman in all professions. The third was change in the pattern of family life.

Thus the question of woman’s liberation in China was a part of the larger question of social change, of creating a new society and a new citizen.

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<sup>38</sup> Victor Lippit, *The Economic Development of China*, M. E. Sharpe, Inc. Armonk, New York/London, An East Gate Book, 1987.

The complete emancipation of women is a long continuing process. The process itself required ample education.

The level of education of the Chinese people were much more compared to India in the pre reform level, this was also true in the case of South Korea. The role of mass education facilitated growth in economic indicators, both in the case South Korea as well as in the case of China.

The institutional development that favored economic growth throughout South Korea and China had come into these countries, in different ways. In the case of China, the pre reform regime, with its own goals and commitments, caused certain changes that turned out to be immensely useful in the market based economic expansion, of the post reform period. The results that both China and South Korea have achieved, was due to the solid foundations of social change that had occurred earlier.

What emerges as important in both the economies is the role of the state. The state in the case of China adopted draconian measures at that time to control population, and spread the type of cultural education that it did, abolish the caste system so to speak, help in reducing the gender inequality that was in existence previously and the upliftment of



women<sup>39</sup>. All this was achieved at a price, the price of the government being immune to public pressure and no opposition party or political dissent was tolerated. The absence of democracy meant that political leaders could hang on to disastrous policies for a long time, inspite of hundreds of people dying of hunger and famines occurring with frequent regularity.

In the case of S. Korea, the state did not adopt similar draconian measures, as was the case in China. But it definitely inculcated in the Education System, intolerance towards dissent, and discouraging trade unions. In India on the other hand, though the state played an important role in deciding the course of action that the country was to undertake; it's ability and commitment towards bringing about substantial improvement in the social indicators remained wanting. It was not that it was so in all states of India e.g. Kerala did achieve high rates of education and literacy levels under a democratic set up. These rates are comparable to China. Thus it is possible to achieve required levels of social indicators even under a democratic government.

India has much to learn from both China and South Korea in the field of social policy. The success of these two countries had been to a great

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<sup>39</sup> Dreze and Sen, *India Economic Development and Social Opportunity*, O U P, Delhi, 1995.

extent the result of the stronger political commitment of its leadership. The challenge is how to learn from their experiences and in cooperate them within the democratic framework, which India has so proudly maintained.

## CHAPTER 2

### HEALTH

Taking the next social indicator namely Health, I will try and trace the effect that this social indicator has on the extent of economic development that a country has achieved. Taking first the case of India, one sees that after 50 years of Independence, there has been a definite decline in death rates. There has also been an improvement in the overall levels of health of the economy. By health of the economy I mean the (1) decline in the infant mortality rates (2) increase in the life expectancy rates (3) reduction in the gender bias against female health. What one has to try and see is whether the improvement in these indicators, are sufficient for the economy, to increase the level of economic indicators and also whether the levels that we have achieved today are comparable to the ones which China & South Korea had achieved, before they were able to reach the high levels of economic indicators that they did. Also we have to examine, whether, the improvement, in the above mentioned aspects of health have had a bearing on these countries achieving what they have i.e. is it that Health is an equally important social indicator as education for economic development. If so then, why is it that this realization did not occur earlier, and what is it, that the Indian economy is doing to achieve levels that are mandatory for higher levels of growth.

In India what has been achieved after 50 years of Independence is the definite decline in death rates. This has been mainly possible because epidemics have been controlled. India today remains mid stream in its demographic transition, and the future pace of decline in fertility and mortality rates are by no means certain. The Demographic Transition theory states that as mortality declines, a marked shift occurs in the reasons of the major causes of death. Whereas high mortality population, suffer predominantly from the disease of poverty and underdevelopment i.e. infectious, nutritional and reproductive health hazards, low mortality population experienced death caused due to urbanization and affluence.

India may be experiencing both the problems of health transition simultaneously, i.e., health problems associated with underdevelopment<sup>40</sup>, which, occurs among the poor, and disadvantaged, and the emergence of diseases of affluence, prevalent among the urban middle class. Also, diseases caused by new environmental and behavioral threats, affect all population groups.

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<sup>40</sup> Jean Dreze and Amartya Sen, *India Economic Development and Social Opportunity*, O. U. P. Delhi., 1995.

We see that with the decline in death rates and the increase or stagnating, levels of birth rates the population has grown at levels of about 2½ per cent per annum till the mid seventies. During the eighties and especially the nineties with the Indian economy opening up and liberalization and globalization being the key words, under whose umbrella the Indian economy has decided to progress we have to examine the nature of economic growth and it's relationship with issues of health.

This increase in GDP and GNP that occurred is to a large extent due to the top 30 per cent of the population. It has not filtered down to the lower levels of population resulting in increasing disparity between the rich and the poor. This has been reflected in the different types of problems being faced by different sections of the population. In the same country we have problems of health, which are attributed to the advanced countries of the world and there are problems, which are attributed to the underdeveloped economies of the world too.

We see in the table below the changes in the infant mortality rate and total fertility rate between 1975 and 1990.

Infant Mortality Rate is defined as the probability of a child dying before its first birthday per thousand live births<sup>41</sup>.

Total Fertility Rate is defined as the number of children a woman would bear during her reproductive years i.e. 15-49 years<sup>42</sup>.

**INDIA: A Comparison between Infant Mortality Rates and Total Fertility Rate and Per Capita Incomes for various Quartiles, for 1975 and 1990.**

Income per Capita (1985 - 1 \$)	Poorest 25 per cent	2nd Quartile	3rd Quartile	Richest 25 per cent
<u>1975</u>	645	753	853	1215
<u>1990</u>	885	1157	1312	1933
<u>per cent Change</u>	37	54	58	59

IMR

<u>1975</u>	161	115	83	115
<u>1990</u>	88	71	65	65
<u>per cent Change</u>	-45	-38	-22	-43

<sup>41</sup> Anthony R Measham, Krishna D Rao, Dean T Jameson, Jia Wong and Alaka Singh, Reducing Infant Mortality and Fertility (1975-1990), Performance at All India and State Levels, *Economic and Political Weekly*, May 29- June 4 1999.

## TFR

<u>1975</u>	5.3	4.6	3.8	5.0
<u>1990</u>	4.2	3.6	3.0	3.4
<u>per cent Change</u>	-21	-22	-21	-32

(Income is in 1985 international \$ prices.)

Source: World Bank Report

The regression results indicate that per capita income is a significant predictor of both Infant Mortality and Total Fertility. Compared to other low and middle-income countries, income effect in India is significantly stronger in reducing India's Total Fertility rate. In contrast to the other countries India's IMR is higher.

In 1975 a one \$ 500 increase in per capita income reduced IMR by 9 deaths per 1000 live births, while in 1990, this increase lowered Infant Mortality by 12 deaths per 1000 live births<sup>43</sup>. Total Fertility Rates have fallen each year for every quartile for every Per Capita Income level in 1975. In 1985 the IMR of 108 deaths per thousand live births fell to 76 in

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<sup>42</sup> Ibid.,

<sup>43</sup> *ibid.*,

1990, cutting across all income levels, all because of an increase in Per Capita Income.

For Total Fertility Rates, an increase of 500 international \$ in Per Capita Income caused Total Fertility Rates to fall by 0.4 births in 1975. With rising per capita incomes the TFR fell to 4.0 in 1980, 3.8 in 1985 and 3.5 in 1990. Thus Per Capita Income was responsible for less than 40 per cent of the fall in Total Fertility.

Looking at some basic statistics of the Indian Economy we have

**\* Trends in Crude Birth Rate, Death Rate, Natural Growth Rate and Expectation of Life at Birth.**

Period/Yr.	Rate per '000 population per annum			Expectation of Life at Birth (yrs.)	
	Birth rates (BR)	Death rates (DR)	Natural Growth	Male	Female
1961-71	41.2	19.0	22.2	46	45
1971-81	37.2	15.0	22.2	51	50
1980	33.7	12.6	21.1	54	55
1981	33.9	12.5	21.4		
1985	32.9	11.8	21.1		
1988	31.3	10.9	20.4		

\* [Source: Basic Statistics relating to the Indian Economy Vol. I

All India Aug. 1990]



From the table above we see that, over the years the DR has been continuously declining so has the BR, but since the BR were high to begin with, we are left with high rates of growth of population. But in subsequent years the decline in DR will not be at the same rate as the decline in BR, the fall in BR being faster, resulting in a fall in the natural rate of growth of population.

Since Independence one of the most striking demographic features in India has been the decline in mortality. The fall in mortality rates in this period is quite impressive, thanks largely to the control of epidemics, which earlier took a heavy toll of life.

**\*Infant Mortality Rates**

Period / Year	Infant Mortality (Per 1000 live births)
1961-71	129
1970	129
1971	129
1972	139
1975	140
1978	127
1980	114
1982	105
1984	104
1985	97
1986	96
1987	95
1988	94

\* [Source: Basic Statistics relating to the Indian Economy Vol. I All India Aug. 1990]

The improvement in mortality is also reflected in the rising expectation of life at birth. Since Independence the expectation of life has more than doubled. The average life span in India at the beginning of the present century was only 30 years, now it is around 60. At the end of the century the expectation of life has increased to 60 plus years.

The process of accelerated population growth in India till 1970's were observed to witness a marginal deacceleration during the 1980's, as the decadal population growth was 23.9 per cent compared to 24.9 per cent in the 1970's<sup>44</sup>. Further secular decreases in fertility have been witnessed during 1990's. The annual natural growth rate of India's population has decreased from 1.97 per cent in 1991 to 1.74 per cent in 1998.

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<sup>44</sup> J Dreze and A Sen, *India Economic Development and Social Opportunity*, OUP, Delhi, 1995.

**\* Estimated Birth, Death, Natural Growth Rate, and Infant**

**Mortality Rate, Total Fertility Rate in India 1981-1998**

Year	CBR	CDR	NGR	TFR	IMR
1981	33.9	12.5	2.14	4.52	110
1986	32.6	11.1	2.15	4.15	96
1991	29.5	9.8	1.97	3.64	80
1992	29.2	10.1	1.91	3.60	79
1993	28.7	9.3	1.94	3.54	74
1994	28.6	9.2	1.94	3.57	73
1995	28.3	9.0	1.93	3.54	74
1996	27.5	9.0	1.85	3.40	72
1997	27.2	8.9	1.83	3.32	71
1998	26.4	9.0	1.74	NA	72

\*Source: Sample Registration System Bulletin Registrar General India 1999.

What the above table indicates is that, over the years there is a declining trend in birth rates, resulting in a fall in the natural rate of growth of population. Also with an improvement in health services, there is not only a decline in death rates, but also a fall in infant mortality rates.

Thus the optimistic explanation about India's population growth process can be that there have been general improvements in human health and life expectancy, rising per capita income, remarkable advances in food production and population growth stimulated technical innovation. Could one of the explanations, for the rates of growth of population, be connected with the development of the agricultural sector?

Alternatively population growth seems to be higher in areas with higher non-agricultural sectoral development. It is the process of urbanization and industrialization, which is leading to higher and higher concentration in larger towns and mega cities resulting in urban environmental problems.

### Mortality Rates

Factors responsible for decline in mortality in the industrialized countries are improvement in nutrition, housing and clothing, sanitation, water supply, cleanliness and individual hygiene practices. Nag<sup>45</sup> found that the lower levels of mortality in Kerala were mainly due to higher social development (in terms of education, health, transport) and partly due to favorable environment and hygiene conditions.

Differentials in mortality by sex are now nearly universally recognized. With equal care and feeding, females experience lower mortality. The survival advantages are particularly strong during the neo-natal period. This is generally considered to be the result of the greater biological frailty of the male infant with regard to congenital defects and the birth process. In West Europe and North America, female children typically

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<sup>45</sup> Moni Nag, "Planning and Social *Development*: Some Key Issues", K.S Parekh and Sudershan eds, *Human Development and Structural Adjustment*, Macmillan Publication, India, 1993.

have a substantial survival advantage. In contrast countries with basic gender inequality tend to have a high rate of female to male mortality, even, in the 0-4 age group. In India the bulk of excess female mortality in childhood occurs after the age of one. During the neo-natal period when biological factors largely determine survival mortality of girls is lower than that of boys.

The transition to a higher mortality of girls appear to occur at the age of around six months, when breast milk ceases to be adequate for children's nutritional requirements<sup>46</sup>. This is the time when children need extra care, especially as regards feeding and treatment of frequent infections mostly associated with contaminated foods, and socio economic influences become important in determining child survival.

The other factors that affect girl child mortality are<sup>47</sup>

- (1) High caste status. The fact that a child is born to parents from a high caste independent of income, wealth and education, does tend

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<sup>46</sup> Alaka M Basu, "Girls Schooling, Autonomy and Fertility Change: What do these Words Mean in South Asia"? Roger Jeffery and Alaka Basu, eds, *Girls Schooling, Womens Autonomy in South Asia*, Sage Publications, 1996.

<sup>47</sup> Prabir C Bhattacharya, "Socio Economic Determinants of Early Childhood Mortality: A Study of Three Indian States", *Demography India*, Vol.28 Nos (January-June 1999).

to ensure improved health conditions for their children. This has been studied by, Dasgupta in Punjab during the 1990.

- (2) Religion – The religion that one you belong to also has a bearing on the health status of the child. Children born into Muslim families tend to be neglected. This is especially true for the girl child.
- (3) Literacy – Education helps women overcome the barriers set by low autonomy, low social and low economic status. Education strengthens the mother's role in the decision making process.
- (4) Labour force status – For survival of female children an additional consideration is that higher levels of female labour force participation may increase the value attached to the survival of a female child.
- (5) Female - male ratio. In Europe and North America because of the greater survival rates of women, the female - male ratio in the total population averages around 1.05. By contrast India has an abnormally low female – male ratio of 0.93. Where women's

autonomy is present, the female – male ratio in the populations tends to be high.

- (6) Urban-Rural residence – Urban residents do tend to have more facilities available to them and have better access to different types of relevant information. Discrimination against women may be less pronounced in urban areas than in rural areas.

Besides just mortality, morbidity<sup>48</sup> is also an important index to be looked into, while analyzing population figures. Morbidity is a state of ill health, which has been increasingly recognized, as a measurable index of well being. This has the potential of replacing death and Infant Mortality Rates as the index of social development and personal well-being. India has been often described as a subcontinent with substantial regional, rural urban and social group differentials in the standard measure of quality of life.

For morbidity analysis it is appropriate to use household income rather than per capita Income as an indicator of levels of living, because per capita income is a crude and unstandardized ratio of household income

and household size which ignores the impact of age structure, and sex biases present in the intra household distribution of income, resources and consequent welfare<sup>49</sup>. Thus household income is a better indicator to use than per capita income to calculate morbidity.

Human health or morbidity, is mostly determined by three types of attributes:

- (1) Individual attributes such as age, sex, education, etc.
- (2) The household level attributes, such as levels of living variables, religious and caste affiliation, parental characteristics, etc.
- (3) Environmental and policy level variables which also reflect the exogenous environmental factors such as rural or urban living, state or region of residence, extent of hygiene and sanitation, accessibility to safe drinking water and accessibility to health care facilities.

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<sup>48</sup> Abusaleh Shariff, "Differentials and Determinants of Morbidity in India. Disaggregated Analysis", *National Council of Applied and Economic Research*, henceforth NCAER, Working Paper. "Health Transition in India".

<sup>49</sup> *Ibid.*,



The incidence of morbidity, which is high during infancy, consistently declines and reaches a minimum by the age of 20 years and again rises. A 19 per cent relative advantage for female children in the 0-4 years of age is almost lost in the 5-15 age group; and in the 15-34 and 34-59 age categories it in fact turns into an 11 and 16 per cent disadvantage. This means that the health care of females reduces, almost as soon as their birth, the biological advantage that the female children have result in a high survival rate in the beginning, but once the social factors come into play especially the ones that favour the survival of the male child the biological advantage is lost. Further, because of the high levels of morbidity among females, in the age group 15-34 and 35-49 age categories, there are very important implications on reproductive health.

The levels of morbidity can be reduced, by reducing income inequalities. The reduction in income inequalities or the increase in the income of the lower 30-40 per cent of households in India would result in an increase in their personal and their household hygiene, better nutrition and better sanitation. All these factors would definitely result in a reduction in the levels of morbidity.

## Fertility Rates

Firstly looking at a comparison of Infant Mortality Rates and Total Fertility Rates in Asian Countries (1986)\*

### A Comparative Study of Infant Mortality Rates (IMR) and Total Fertility Rates (TFR) in Asian Countries 1986

	IMR	TFR
South Korea	25	2.1
China	33	2.4
India	97	4.5

\*Source: Infant Mortality in relation to Fertility. A collaborative study sponsored by Family Planning Foundation India and International Development Research Center Canada (Dr. B.K. Patel)

The table above indicates that, the country, namely South Korea and China, with low total fertility rates, experience low infant mortality rates.

Dr. Patel's study further shows that<sup>50</sup>:

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<sup>50</sup> Dr.B K Patel, "Infant Mortality in Relation to Fertility: A Collaborative Study", sponsored by *Family Planning Foundation India and International Development Research Center*. Canada.

- (1) The number of boys that a family wants, is dependent on whether the matriarchal or patriarchal system prevalent in those areas under study, number of girls wanted by the family, the total number of children that is wanted by the family, the number of children surviving, whether or not more children are needed in order to ensure the desired number required by the family, whether the survival chances of children during the last five years have been increasing, whether the families prefer spacing or terminal methods of family planning.

India being a diverse country, with large regional variations in the rates of population, education, health as well as development, states like Kerala can be compared to the developed countries of the world, and on several counts compare well with China and South Korea. Other States in contrast have remained far behind and rank among the lowest in the world. Looking now at the State wise figures for life expectancy and infant mortality rates (1990-1992)

## State-wise figures for life expectancy and Infant Mortality

### Rates (1990-1992)

State	Life Expectancy		Infant Mortality Rate
	Male year	Female	
Kerala	74.4	68.8	17
Tamil Nadu	63.2	61.0	58
Haryana	63.6	62.2	71
Punjab	67.5	65.4	57

Source; Dreze and Sen: India Economic Development and Social Opportunity. (O.U.P.Publication)

We see that in India the State of Kerala, is unique not only in the levels of life expectancy, but also in the infant mortality rate. The reason why the life expectancy rates have increased is because of the improvement in mortality rates, which have been attributed largely, to the control of epidemics<sup>51</sup>. One of the reasons why Kerala has achieved such low levels of infant mortality is because of the increasing levels of education, and the higher age of women at marriage in rural areas. Generally, most of the births, in the rural areas, are attended to only by untrained medical practitioners, while in the urban areas only 38 per cent are attended to by untrained medical practitioners. Thus, larger the population in the rural areas, and lower the level of education in the state, the higher the number of infant deaths.

**Distribution of Poor population in the Rural and Urban areas for the period 1951-71, for some States:**

State	1951			1961			1971		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Kerala	1.83	11.72	13.55	2.55	14.35	16.90	3.47	17.88	21.35
Tamilnadu	7.33	22.79	30.12	8.99	24.70	36.69	12.46	28.74	41.20
Punjab	1.99	7.17	9.16	2.57	8.57	11.14	3.22	10.33	13.55
Haryana	0.97	4.70	5.67	1.31	6.28	7.59	1.77	8.27	10.04

\*Source: Dreze and Sen

These figures do indicate that despite the relatively higher population in the rural areas, Kerala has achieved the lowest infant mortality rate. Immunization programs have helped in achieving low levels of neo natal mortality rates, but before this program was implemented in Kerala it was preceded by simple but powerful tools like trained birth attendance, institutional deliveries and personal hygiene.

What explains the considerably positive developments in the social sector in Kerala? Can it be related to the type of governance? Has it got something to do with the powerful Left influence in Kerala? These questions are complex.

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<sup>51</sup> Dreze and Sen, *India Economic Development and Social Opportunity*, OUP, Delhi, 1995.

If we take the case of West Bengal we find that though the political administration of the State is very similar to that prevalent in Kerala the Infant Mortality figures are vastly different<sup>52</sup>. For example, Kerala has an Infant Mortality Rate that is 1/3<sup>rd</sup>, and a female literacy rate that is twice that of West Bengal. The answers to this difference lies, in the historical and institutional factors that have governed social progress in Kerala. The expenditures in social sectors are higher in Kerala than W.Bengal, the more financially secure the State, the better its performance in terms of outlays on social sectors (Increase in share of Social Sector outlays 1980/81-1986/87)<sup>53</sup> Also what is apparent is the history of educational priorities since 1947. In Kerala the emphasis was on actual resource allocation on primary education. The growth of the mass media and the role, played by political parties, trade union and mass movements in mobilizing people around social issues are all important Kerala type of phenomena. This has to be duplicated all over India, if India is to achieve comparable results vis-à-vis the advanced countries of the world, or even China and South Korea.

There are backward regions in the country where there are, high degree of political consciousness and mobilization but unfortunately around non-

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<sup>52</sup> Dreze and Sen, *India Economic Development and Social Opportunity* OUP, Delhi, 1995.

developmental issues like caste. Traditional sectors of education and health appear to have lost ground in states like Andhra Pradesh, Tamil Nadu and Gujarat. The rice subsidy scheme has been an effective anti poverty instrument in Andhra Pradesh, as has been the mid-day meal scheme in Tamil Nadu but neither of them have resulted in noticeable declines in health figures. The real problem is the long-term sustainability of these schemes which are essential for noticeable decline in poverty and improvement in social indicators like health and education, Moni Nag suggests<sup>54</sup>, that neither Andhra Pradesh nor Tamil Nadu Budgets can afford to continue with these schemes for long given the fiscal positions of their State Budgets.

The argument put forward by Dr. N.H. Anita, an authority on the availability of medical facilities is that “the chief beneficiary of the present system of medicine is the medical profession and not the public”. The vast majority of the medical profession has neither by training, nor interest, the ability, nor the desire to deliver the type of health that the vast majority of the people of this country need. What the country needs is a simple but effective health scheme, with emphasis on prevention and

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<sup>53</sup> Jairam Ramesh, “Planning and Social Development: Some Key Issues”, eds., K.S.Parekh and Sudershan, *Human Development and Structural Adjustment*, Macmillan Publication, India, 1993.

<sup>54</sup> Moni Nag, “Planning and Social Development: Some Key Issues”, eds., K S Parikh and Sudershan *Human Development and Structural Adjustment*, Macmillan Publication, India, 1993.

health education, and not a sophisticated personalized and expensive illness service which is presently being provided. There are also inadequate availability of drugs, shortage of doctors, nurses, midwives and laboratory technicians in rural areas<sup>55</sup>. The government could concentrate on public health, leaving expensive hospital facilities to the private sector as far as possible.

The allocation of resources between medical personnel, and medical equipment and medical supplier should be at an optimum given their costs. The government should take steps to approach this optimum. Fully trained doctors can reduce infant mortality rates. Even if this is not possible, the training of paramedics and medical personnel could, to some extent, reduce the levels. The presence of medical attendance at birth definitely reduces the mortality rate before and during child -birth. There is an inverse relation between infant mortality rates and the availability of trained medical attendance at birth. But one should keep in mind the emphasis on the rural areas vis-à-vis the urban areas. To reduce infant mortality rates one has also to improve female and infant nutrition. Thus one should have a wide spread of health network to avoid death at birth or

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<sup>55</sup> "Basic Statistics All India States", , *Center for Monitoring Indian Economy* henceforth CMIE. August-September 1988.



soon after. The age where maximum death was perceived was in the age group (0-4) years.

Infant mortality rates must be brought down. The tendency of having more children as insurance against the death of some can be curbed by reducing the perceived risk of having fewer children. Schemes should be aimed at better nutrition, health, education and other aspects of child development in one package.

It has been observed that infant mortality rates occur largely in rural areas and amongst the poor. What occurs in this group is that as daily wage workers, their economic situation is such that even women have to work, leaving small babies in the trust of older siblings thus exposing them to higher risk of infection<sup>56</sup>. Immediate action in case of illness is also difficult as it involves a high opportunity cost. Children of illiterate mothers have a significantly higher incidence of diseases than children of literate mothers. The education level of father also makes some difference. The difference is indirect, in the sense that he may want all his children irrespective of sex to study till at least a minimum level, or that he may want to marry an educated woman, albeit less definitely less

educated than himself, but the most important effect, which is most direct is the education of the mother.

Social deprivation is the main cause of inequalities of health experienced by the various poor people in the economy<sup>57</sup>. Unequal access to resources leads to unequal exposure to risk of diseases and this finally leads to unequal disease, burdens, growing up in landless families, eking out a hand to mouth existence, higher drop out rates from school, joining the wage labour force at an early age; all this leads to a greater vulnerability to diseases and poor health facilities. Girls go through early marriage and are under tremendous social pressure to bear children immediately. Thus inadequate nutrition coupled with manual labour and young age at marriage, result in high infant mortality rates.

According to V.Gopalakrishnan, Ansari and C. John in their article in *Demography India* "Determinants of Desired Family Size in Kerala", they observed that Education and age at marriage are observed as significant factors influencing desired family size and fertility. The relevance of educational change is important because it influences the

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<sup>56</sup> Usha Ram, "Household Amenities and Regional Variations in Infant and Childhood Mortality in Maharashtra", *Demography India, Population-Society-Economy-Environment-Interactions*, Journal of the Indian Association for the Study of Population, Vol28, Nos2, July-Dec1999.

<sup>57</sup> Prabir C Dasgupta, "Socio Economic Determinants of Early Childhood Mortality: A Study of Three Indian States" *Demography India*. Vol 28 NosJan-June 1999.

decision making process of couples with regard to their family size, Similarly the rise in age at marriage has influenced fertility decline. The influence of education was to narrow down the difference between desired family size and the actual fertility. The difference between the desired family size, and the actual number of children have merged gradually, due to availability of health services. The major factor that could contribute to this has been the indirect influence of education resulting in declining infant mortality rates. The other factors that are responsible for this merger are cultural factors like religion, economic factors like occupation and the most important being the increasing use of contraception.

The use of contraception has emerged as an important factor in explaining the decline of fertility rates in the country and particularly in States, which have shown a continuous decline in fertility levels.

Anirudh Jain<sup>58</sup>, has indicated that the Total Fertility Rate has declined from 5.7 births per women in 1970-72 to 4.5 in 1980-82 to 3.7 in 1990-92. According to National Family Health Scheme their calculations on the number of births per women is 3.4. One of the reasons for the decline

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<sup>58</sup> Anirudh Jain, "Consistency Between Contraceptive Use and Fertility in India", *Demography India*, Vol26 Nos1 (1997).

in Total Fertility Rate is the increase in the Contraceptive Prevalence Rate.

### Fertility Transition in Indian States

If conception outside the institution of marriage is ignored, then the change in the birth rate may be influenced primarily by three factors.

- (1) Conception during married reproductive years.
- (2) Pattern of entry of females into married reproductive period.
- (3) Age structure of the population.

All social, cultural, demographic, economic and family factors operate through and only through these three factors to influence the crude birth rate<sup>59</sup>. Their analysis reveals that in most of the states of the country, a decline in crude birth rate is attributable to the decline in total marital fertility rate, and increase in the fertility inhibiting effect of marriage, appears to be compensated to a varying extent, by the changes in the age structure and its subsequent effect on crude birth rate.

The other factors, which effect fertility, are

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<sup>59</sup> Jandhyala B G Tilak “, National Human Initiative Education in the Union Budget”, *Economic and Political Weekly* March 6-13, 1997.

- 4) Female literacy
- 5) Infant mortality change
- 6) Family planning acceptance.

Besides this reduction in poverty levels also play an important part in reducing the fertility rates in the economy.

Since Independence, India has accomplished many notable social and economic achievements. Among these are the eradication of widespread famine, a reduction in population growth and to some extent lowering of caste barriers to economic opportunity and the creation of a large pool of technical and scientific talent<sup>60</sup>. It has really managed to reduce poverty only since 1975, when growth accelerated and the decline in poverty has gathered momentum. But the pace remains, both slow and uneven, faster in the Southern States than the Northern ones, and more likely to empower men than women. Government efforts to reduce poverty through direct interventions have yielded mixed results<sup>61</sup>. Many of those programs have missed their supposed targets – the poor – and delivered

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<sup>60</sup> “Children and Women in India: A Situation Analysis 1990”, *United Nation Children’s Fund*, New Delhi.

<sup>61</sup> Moonis Raza, Aijazuddin Ahmed and Sheel ChandMuna, “school Accessibility in India. The Regional Dimension”, *National Institute of Education Planning and Administration*, henceforth NIEPA, 1984.

their benefits to the economically more advantaged. What is required is a conscious effort on the education front in the age group 6-10 years and the reduction in gender discrimination. It is this gender discrimination, which condemns a much larger proportion of girls and women to illiteracy and ill health. Reducing the gender inequality among the poor requires a determined effort to focus on improved health care for women, maternal health care in particular,

combined with basic education. An emphasis on basic care will improve not only the life span and well being of poor women and their ability to determine what family size they want, it will also contribute to the economic health of their families and consequently of India's society.

The pattern of Crude Birth Rate and Crude Death Rate help us to demarcate different stages of demographic transition. Barring Rajasthan and Uttar Pradesh, all the States as well as India (as a whole) entered the third stage of the Demographic transition i.e. a stage characterized by low birth rate and low death rate, leading to falling rates of growth of population, during the 1980's.

States where absolute poverty is high, death rate is high, birth rate is high, thus to reduce the birth rates, death rate has to be reduced<sup>62</sup>.

States that will achieve a natural growth rate of population of 1 per cent by the end of the 20<sup>th</sup> century are the four Southern States<sup>63</sup>.

#### Allocation of Health Expenditure to the various States.

Results confirm that there is a positive association between the magnitude of health expenditure and the health status of individuals particularly with life expectancy. Health financing is invariably directed towards the urban sector. Curative health care draws maximum outlays provided in state health budgets.

Allocative efficiency of States budget on health sector needs in-depth scrutiny. A higher share of Gross Domestic Product does not necessarily guarantee a better health status.

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<sup>62</sup> S.Irudayarajan, Mala Ramanathan and U S Mishra, "Female Autonomy and Reproductive Behavior in Kerala", eds Alaka Basu and Roger Jeffery, *Girls Schooling, Womens Autonomy and Fertility Change: What do these Words Mean in South Asia?* Sage Publications, 1996.

<sup>63</sup> Ashok Mitra, "Status of Women, Literacy and Employment", *Indian Council of Social and Scientific Research* henceforth ICSSR Programme of Women's Studies, Allied Publishers Private Limited.

**Health indices for the year 1992 and earlier:**

	<u>Year</u>	
Life expectancy (years)	1992	59.7 years
Access of health services ( per cent)	1985-91	-
Access to safe water ( per cent)	1988-91	-
Access to sanitation ( per cent)	1988-91	15
<u>Health expenditure as a per cent of G.D.P.</u>	1992	1.3
<u>Military expenditure as a per cent of G.D.P.</u>	1992	3.1

**The comparison of Health figures between 1960 and 1992:**

<u>Year</u>	<u>Earlier Year</u>	<u>Later</u>
	(1960)	(1992)
Life Expectancy at birth (yrs.)	44.0	59.7
Infant Mortality Rate (per 1000 live births)	165	89
Under 5 mortality rate (per 1000 live births)		130

(The source for all the above figures is Country Human Development Indicators 1994. UNDP Human Development Report, New York.)

Thus we see that there is a vast decrease in Infant Mortality Rates between 1960 and 1992, but these figures are still on the higher side, the amount of health expenditure as a percentage of GDP is only 1.3 per cent,



compared to this the percentage of defense expenditure is 3.1 per cent of GDP in 1992.

A further country wise comparison indicate:

**\* Demography and Fertility in Selected Countries**

Average Annual Growth Rate of Population

per cent

	<u>1963-80</u>	<u>1980-85</u>	<u>1985-</u>
			<u>2000</u>
India	2.3	2.2	1.8
China	2.2	1.2	1.3
Korea Rep.	1.9	1.5	1.2

**\* World Bank World Development Report 1987**

Country	CBR per 1000 Population (1985)	CDR per 1000 Population (1985)	per cent Of married women of Child bearing age using contraceptives (1985)
India	33	12	3.5
China	18	7	69
Korea Rep.	21	6	70

\* Source: World Bank, World Development Report, 1987.

The above table indicates that, in the years 1963-1980 China and India had almost the same average rate of growth of population, and S.Korea had a rate of growth of 1.9 per cent, but in 1985, China managed to reduce its rate of growth to 1.2 per cent, S.Korea had a rate of growth of 1.5 per cent, this was mainly due to the drastic decline in the birth rate figures, of both China and S Korea.

Dreze & Sen have emphasized that Kerala has achieved considerable women emancipation, which explains improvement in a lot of social indicators. It means that a greater emphasis must be on women all over the country. This should be an imperative part of all policy matters of all the States in India. One should be in a position to emulate the results that have been achieved by Kerala in this respect. There are indicators that Tamil Nadu and Himachal Pradesh have been able to achieve some success in this sphere.

The reason for emphasizing the status of women is that social justice can be achieved only through the active agency of women. The suppression of women from participation in social, political and economic life hurts the society as a whole, not just women. The emancipation of women is an

integral part of social progress. There are a number of social scientists who, have recently started questioning the plight of women.

It is to be noted that, despite the high levels of social development that have been achieved in Kerala, economic development has not kept pace with these high levels. The late age of marriage of women in Kerala is not necessarily, a conscious decision on their part, nor is it for the love of educating themselves further, but it is because the society requires them to stay on and educate themselves so that they can earn their dowries<sup>64</sup>, it is not necessarily a sign of emancipation of women, or a rise in their status. It is the economic development of the State, along with social development, which will result in betterment of the women in the State. The two have to go together, emphasis on any one of them need not lead to betterment of the State in all respects.

Thus I feel that it is just not only social indicators or government emphasis on them in the form of higher levels of expenditure, which will achieve high levels of economic indicators. There are other factors, which could be responsible. There could be certain existing factors, which are already prevalent before the country embarks on the path of

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<sup>64</sup> Padma Subramaniam, "*Work Participation Rates in Tamil Nadu and Kerala*", Lecture delivered in School of Social Medicine, Jawaharlal Nehru University, and New Delhi, 14<sup>th</sup> February, 2000.

progress, these factors could be land reforms, and the emphasis on certain value systems inherent in the upbringing of the society. Thus social and cultural factors existing in the economy could I feel have played an important role in the development of the nation. I don't negate the effect of social indicators but they may not be the only factors that are responsible for the growth of the other two countries that I will discuss now, namely China and South Korea.

## CHINA

In the 1950's both China and India had rudimentary health care system. India started working on the Bhore Committee Report, which prescribed a rather top heavy model with big hospitals in townships and district and primary health centers for village clusters. China on the other hand took a three tiered model with a vast foundation in the form of Barefoot Doctors. With Barefoot Doctors, China gave a concrete shape to its health intentions down to the grass root level. These were namely a) Curative, b) Preventive, c) Promotive.

India's Bhore Committee Report was weak at the village level infrastructure and lay stress on shaping it up like the British System.

China on the other hand, fought it out without any external, technical or financial aid. The Chinese rulers worked on four principles. (i) priority for the problems of the masses, (ii) prevention first, (iii) making the most of traditional and local resources, and combined these with modern medicines and mobilization of community for solving health problems. China acted on these principles and there the support system was available, which was in a position to absorb the policies they adopted, namely the collective system, the communes, the work brigades and the production teams, which ensured the implementation of the policy. This worked very well for China and put China's health on a strong foundation. During the 1950's and 1960's, China established its health facilities at three levels<sup>65</sup>, namely (1) the village (2) the township, (3) the country.

## **HEALTH AT DIFFERENT LEVELS**

### **Level One – The Village**

This was known as the brigade health station. It had one or two bare foot doctors, a health aide, and sometimes a nurse. This served the masses at the grass root level. Apart from treatment of common ailments, bare foot

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<sup>65</sup> Shyam Ashtekar, "China: Reforms and Health Care", *Economic and Political Weekly*, October 9, 1999.

doctors, offered health education, it spearheaded preventive campaigns and administered co-operative medical scheme.

### Level Two – The Township

The township health centre was formerly known as commune clinic. It was for 15-20 villages and covered approximately 40-50 thousand population. It provided both curative and preventive services.

### Level Three - The County

This served a population of about 4-5 lakhs. This was equivalent to 2-3 talukas in India. It had several facilities like a 400-bed general hospital, professional schools for bare foot doctors and nurses.

Besides this there were provincial hospitals which were attached to medical colleges, like is the case in India. Chinese leaders laid emphasis on native healing systems, right from the beginning.

This system of hierarchy of the health system continued till 1978. The rural people had a co-operative medical system in 95 per cent of the

villages in China. After the disbanding of communes in 1978, the co-operative medical system collapsed.

The first thing that occurred was that the bare foot doctor scheme and the village health scheme gave way to the user fees scheme i.e. fees were charged from the people for the use of medical facilities, since the fees at the level one were relatively small, people somehow accommodated this additional cost. But as one used the higher levels of medical facilities namely level 2 and level 3, the fees increased and it affected the utilization of hospital services in China.

Looking now at the effect of these policy measures on various health indices for China, we have to be a little careful on the credibility of Chinese population statistics. What has to be kept in mind is that <sup>66</sup>(i) the Chinese communists do occasionally use their population data for propaganda purposes, (ii) there is an absence of limits and qualifications to be observed by the users of data, (iii) official releases and commentaries seldom indicate source of data, method of collection or supervising agencies, nor do they distinguish between estimates and reported data, (iv) most of the published data, however inadequate, are

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<sup>66</sup> John. S. Arid, *The Composition and Growth of Population of Mainland China*, Foreign Manpower Research Office Bureau of the Census International Population Statistics Report, 1985.

probably the best available statistical information. (v) main obstacle is that statistical work done by official data collecting agencies is usually of very inferior quality.

Taking this problem into account, it would be appropriate to divide the health system of China into two periods. One from the 1950's & 1978 – that is pre liberalization and the second from 1978 onwards – that is the aftermath of the reform process started by China.

Taking the first period namely 1950's – 1978, we see, that the population growth of, 2.2 per cent in 1965-80, fell to 1.2 per cent in 1980-87. This contraction is a direct result of family planning and the one child policy followed by China.



**MAJOR DEMOGRAPHIC STATISTICS FOR**  
**THE PEOPLES REPUBLIC OF CHINA**

Year	Total Population (Million)	CRB (per 1000)	CDE (per 1000)	Total Fertility Rate
1950	552	37.0	18.0	5.81
1955	615	32.60	12.30	6.26
1960	662	20.70	25.40	4.02
1965	725	37.88	9.50	6.08
1970	830	33.43	7.60	5.81
1975	924	23.01	7.32	3.57
1980	987	18.21	6.34	2.24

Sources: Tot population, CBR, CDR from the China Statistical Year Book. Total fertility rate from Department of Planning and Statistics, China State Family Planning Commission.

In China some scholars like Prof. Ma Yenchu asserted that increase in population led to slow capital accumulation<sup>67</sup>. For improving the people lives what was required was greater production both in the agricultural

and industrial sectors. For this one had to reduce consumption and increase capital accumulation, both of which required controlling population growth. If the Chinese government did not want to fail in feeding the enormous and fast growing population as previous governments had done, if China did not want the history of the immediate past to be repeated: it would have to be successful in economic development which required the growth of its population to be controlled.

Besides this, there were other factors which permitted the adoption and implementation of a population policy. These were :

1. Social factors e.g. overcrowding, standing in queues for tickets, food etc., people themselves started complaining about the fact that there are too many people.
2. Social Surveys in China demonstrated that a majority of the population would obey the one child per couple policy even though only about half of the people voluntarily supported it<sup>68</sup>.

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<sup>67</sup> Gabe T Wang, "China's Population Control Policy", *China Report*, 1996.

<sup>68</sup> *Ibid.*,

3. The Chinese have not inherited any religious taboos which may have acted so as to prevent them from practicing family planning or having abortions.
  
4. The social status of women. The social status of Chinese women has changed since 1919 and especially after 1949. The Marriage Law of 1950 had a lot to do with this. The basic principle of the law was to abolish the arbitrary and compulsory feudal marriage system, which was based on superiority of men. Social status and education are closely related to and complement each other. The changed social status and education have encouraged many Chinese women to practice family planning.
  
5. The absence of democracy. There is only one party that possesses power to control the country, this along with other well instituted organizations, which support rather than oppose it, government policies can be implemented without strong public opposition.
  
6. Strong peer pressure among the Chinese people. They excessively stressed on and practiced equality among the members of their

reference group and made people feel that everybody should behave like everybody else.

7. China's well established organization for implementing the policy.

At the national level there is a Birth Planning Commission under the State Council. The Ministry of Finance and the Ministry of Employment have been instructed to grant the single child and his/her parents privileges in employment. At the provincial level too, there are Family Planning Commission, and at the grass root level in almost every unit there is a family planning worker or volunteer who works for the unit. These grass root family planning workers have been very effective in ensuring that people accept the population control policy and practice family planning.

The result of these policy measures were, as the table shows, that over the years China has been able to achieve a phenomenal decline in the rates of growth of population, largely due to the policy measures followed in controlling birth rate figures.

## CHINA AND INDIA: DEMOGRAPHIC PERSPECTIVE

		China	India
1	Crude Birth Rate		
	1960	39	48
	1982	19	34
2	Crude Death Rate		
	1960	24	24
	1982	7	13

Source: World Bank, World Development Report 1984, New York-1984.

Pgs.254-56.

The National Policy was summed up in the slogan<sup>69</sup> Wan Xi Shao (Later, Longer, Fewer)

In January 1979, the one child policy was launched with a series of rewards for those women who bore only one child, and punishment for women who had more than two. In the ensuing years, punishments were also meted out to any women who exceeded one birth. The 1970's were

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<sup>69</sup> Kejung Sup Chang, "Birth and Wealth in Peasant China" eds. Alice Goldstien and Wang Fong, *China: The Many Facets of Demographic Change*, Brown University Studies in Population and Development.

a period of economic stalemate for most socialist countries including China. In rural China, the increasingly unfavourable man-land ratio, the institutional impasse in efficient management of collective agriculture, and the tight control of peasant migration were all responsible for the stagnant, and in some cases deteriorating economic and social conditions of peasant life. Under these circumstances, the state policy of strict birth control was more easily accepted.

One can then say that the dominant state policy of one child family and the manner in which it was imposed and the subsequent follow through led to the decline in the crude birth rate, and the rate of growth of population. But then again it was the state which decided on the policy and its implementation. Looking now at the other indices, which are a result of the policies followed by the state namely.

1. Infant mortality rate
2. Total fertility rate
3. Life expectancy Rate
4. Dependency Ratios

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<sup>69</sup> Kejung Sup Chang, "Birth and Wealth in Peasant China" eds. Alice Goldstien and Wang Fong, *China: The Many Facets of Demographic Change*, Brown University Studies in Population and

## Infant Mortality Rate

Prior to 1949, China's Infant Mortality Rate (IMR) was likely above 200 per 1000 live births. In the 1950's reduction began to occur. These were due mainly to the training of mid-wives, improved nutritional conditions and better environmental sanitation and pest control. IMR in China probably attained a level of about 50 by the 1980's.

Infant mortality decline may be viewed as a by product of social and economic development. The dependent variable being IMR, according to the 1982 census, the average IMR in 1981 was 39.1 per 1000, live births. The first independent variable is an economic indicator, the second independent variable is literacy rates, this variable measures the percentage of the population of age 12 and over in the country in 1982 who are literate. The third independent variable also pertains to socioeconomic development; the percentage of the labour force employed in industrial activities in 1982. The fourth independent variable is population density per square kilometer. In China, other things being equal, the more densely, populated an area, the more adequate its medical and public health capabilities. The last variable is the country's population size. This variable is used as a control variable given its

importance in analyzing socioeconomic development and quality of life. The author's suggestions<sup>70</sup> are in increasing the levels of development in the poor countries as well as providing more in terms of public health and medical services.

### Total Fertility Rate

The 1970's saw a dramatic reduction of fertility in China. The Total Fertility Rate decreased from 5.8 in 1970 to 2.6 in 1981, a reduction of 55 per cent. The annual Crude Birth Rate plunged from 33.59 per thousand in 1970 to 20.91 per thousand in 1981, a reduction of 38 per cent. The annual rate of natural increase dropped from 25.95 per thousand in 1970 to 14.55 per thousand in 1981, a reduction of 44 per cent<sup>71</sup>.

The main reason being the enforcement of law which propagated delayed marriage, then fertility reduction within marriage which contributed to the decrease of overall fertility. Fertility decline are especially marked because of a combination of strong family planning programme efforts and improved socio economic conditions. Once a decline in fertility

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<sup>70</sup> Dudley. L. Porton Jr., "Patterns of Infant Mortality" eds., A. Goldsten and others, *The Many Facets of Demographic Change*, Brown University Studies in Population and Development.

<sup>71</sup> Ger Bao Chang, "Fertility from 1970's to 1990's", in A Goldstien and others, eds., *The Many Facets of Demographic Change*.



levels was achieved because of the policy of later, longer, fewer, there was a shift towards 'one child per couple'. In a country which had already achieved low fertility levels, there was not much room left for further decline in individual child bearing, or in the timing of marriage, which would be important for child rearing.

### Life Expectancy Ratios

Life expectancy at birth rose rapidly from 35 years to nearly 60 years – an increase of about 1.5 years annually, about 0.3 to 0.4 years in the 60's and about 0.4 to 0.5 years in the seventies<sup>72</sup>.

### **LIFE EXPECTANCY AT BIRTH FOR SELECTED YEARS BY SEX IN CHINA**

	Total	Male	Female
Pre 1949	35		
1957	57		
1953-54		42.20	45.60
1964-82		61.60	63.60

<sup>72</sup> Coale and Zha "Rapid Population Change in China 1952-1982" in *China Report*, 1993.

Source: Estimation based on historical data taken from China Statistics Year Book 1983.

The table shows that,

Life expectancy at birth for women is actually higher than that for men, reflecting the lower mortality rates for women at earlier ages as well as the fact that women are more biologically fit to survive to old ages. The fact that women's life expectancy has increased faster than life expectancy of men has led to an imbalance in the population of elderly women compared to men. The imbalance in the sex ratio among the elderly has important policy consequences.

Now taking the next period namely 1978 onwards, we see that during this period, pressures on local officials to meet family planning targets have resulted in much false reporting, while economic reforms have given many Chinese the means to avoid the registration systems.

## Comparison of certain health indicators for China between 1960 and

1992:

		1960	1988	1992
1.	Life expectancy at birth	47.1		70.5
2.	Infant Mortality Rate (per 1000 live births)	50		27
3	Maternal Mortality Rate (per 100,000 live births)		130	
4	Total population (million)	657.5		1187.4
5.	Cude Birth Rate			21
6	Cude Death Rate			7

Source: Country Human Indicators 1994, UNDP Human Development Report Office, New York.

What comes out clearly from the above table is the fall in the level of population growth (i.e. from 2.2 per cent (1965-80) to 1.2 per cent (1980-87) Also see is that the rate of growth of 6-11 years old age group declined from 3.3 per cent (1965-75) to 0.6 per cent (1975-80). From 1980-85, the age group contracted at a rate of -3.9 per cent. This contraction is a direct result of family planning and the one child policy. The 6-11 years old age group is now expected to grow at only 0.8 per cent for the rest of the decade.

This is a direct fall out of the policy measures adopted in the previous period. The effect of these polices were more sharply felt in the rural areas too. In mid 1979 the norm in the country side was two children

despite the fact that in urban areas the one child family was increasingly being advocated. During the 80's incentives were being introduced in the rural areas to encourage couples to restrict the size of the family. The family planning program could be visualized as a stool with three legs (i) policy of late marriage i.e. 25 years for males and 23 years for females (ii) educational and propaganda systems are used to encourage married couples to delay pregnancy as long as possible, (iii) Material incentives to couples bearing one child e.g. contraceptives supplied free of charge. Economic benefits also exist e.g. A family with one child receive an income supplement of 40 yuan a year – from the commune public welfare fund till the child was 14 years. One child parents were given priority when allocating jobs. Land was allocated for house construction in such a way as to encourage the one child family. A rough calculation shows that compared with a couple that had a second child, the one child family could increase its total household collective income by a quarter or a third. The official objective is to lower the rate of demographic increase from 1.5 to 1 per cent<sup>73</sup>.

It was these policies that were emphasized time and again in the previous period that resulted in decline in almost all the health indicators. The

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<sup>73</sup> Key Jung Sup Chang, "Birth and Wealth in Peasant China", in Goldstien, Wang Feng, eds., *The Many Facets of Demographic Change*, Brown University Studies in Population and Development.

most dramatic decrease was in the rate of growth of population. This was helped by declining mortality rates and infant mortality rates and also a decline in the fertility rates. All these were made possible by the stringent policies followed by the government. Not only the type of policies adopted but their implementation. In 1950, the government defined four fundamental principles in securing adequate health care:

- 1) Health care must serve the common people
- 2) Priority must be given to prevention of disease
- 3) Western and traditional medicine should be integrated
- 4) Health campaigns should be co-ordinated with other mass campaigns

Thus this meticulous planning in spreading health services not only achieved remarkable results in spreading health services to all parts of the country, it also paved the way for the accepting economic reforms, which had since already been implemented in China<sup>74</sup>. China has attempted globalisation and liberalisation. They achieved remarkable success, but this success, was possible only because it had a base in the form of policy measures which controlled the rate of growth of

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<sup>74</sup> Grant and Jolly, "New Economies of Child Health," in Irma Adelman and Sylvia Lane eds., *Balance Between Industry and Agriculture in Economic Development*, Macmillan Press (8<sup>th</sup> WC of IEA) 1986.

population. Development of social indicators like health are a prerequisite to achieving higher rate of growth of economic indicators.

## **SOUTH KOREA**

Taking the case of Korea, one finds that starting her growth process in the 1960's she has been able to achieve a decline in population growth from 2.7 per cent per annum during the first five year plan period i.e. 1962-66 to 1.4 per cent during the fifth plan period. This has been one of the major factors that has significantly contributed to the improvement in per capita income over the years. Improved nutrition and general health of the population has resulted in a fall in infant mortality from 60 per thousand in 1962 to 31 per thousand in 1986. Life expectancy has also increased from 57.5 years in 1961 to 68 years in 1985.

The shape of the pyramid in 1960 has become bell shaped in 1980 and is expected to become, one with a narrow base at the young ages group. The implications of such a change in population structure are: the share of the working age population ages 15-64 has steadily increased from 53.8 per cent in 1960 to 65.7 per cent in 1985 and is

expected to increase further to 68.8 per cent by the year 2000. On account of the post war baby boom, the share of the primary working age population i.e. (5-24 age) was rapidly approaching 40 during the late 1980's. Since a substantial portions of this group are new entrants to the labour market, there will be a strong pressure to create job opportunities for this group especially for those with higher education. The youth dependency ratio on the other hand i.e. ratio of (0 – 14 years) to working age population (15 – 64 years) has been decreasing very rapidly from 80 per cent in 1960 to an unexpected 37 per cent by the year 2000, thus reducing the burden of child dependency. On the other hand the aged dependency ratio i.e. the ratio of population aged 65 or above to working age population aged 15-64 has been increasing since the 1980's. Since the decline in the youth dependency ratio outweighs the increase in aged dependency ratio, the total dependency ratio has been decreasing over the decades from 86 per cent in 1960 to an expected 45 per cent by 2000.

Tremendous man power potential may be expected in the coming decades if the increase in the working age population can be absorbed in production, but eventually young, workers will be in short supply in the future. On the other hand employment in occupation catering to young clients (e.g. primary and secondary education teachers) will not

increase. The increase in the aged population will require number of new facilities such as medical care and living quarters.

Employment opportunities in welfare occupations such as nursing and social work may be expected to increase in the coming decades.

As a result of sustained economic development, general living standards have improved substantially. Health insurance has been expanded since its inception in 1977. As of 1986, 46.6 per cent of the total population was covered by the scheme.

**Sex Ratio for the total population from 1949-1970. for Republic of Korea:**

	Total in Million	Male in Million	Female in Million	Sex Ratio M/100F
1949	20,188,641	10,200,877	9,987,764	102.5
1955	21,502,386	10,752,973	10,749,413	100.0
1960	24,994,117	12,540,811	12,453,306	100.7
1966	29,159,640	14,684,147	14,475,493	101.4
1970	31,435,252	15,779,615	15,655,637	100.8



Source: Republic of Korea, Economic Planning Board, Bureau of Statistics, Monthly Statistics of Korea 1962 No.12, 1966 Population Census Report of Korea, Whole Country Population and Housing Census Report Vol. I, Complete Enumeration, Republic of Korea.

The table above indicates that over the years the male and female population are almost the same. All this indicates an underlying fact that with basic health facilities reaching each and every member of the population, and education level keeping pace with the level of development in the economy, the status of women have improved, resulting in greater gender equality. It is the combined effect of education and health which has achieved this task. It is when the economy has achieved a basic level in social indicators that it is able to enjoy equitable fruits of development. The beneficial effects of economic development filter down to the economy in a more equitable manner. This can be seen in the case of South Korea that even in 1949, the gender inequality though in existence was of a very negligible amount. The base for achieving high rates of growth of economic development was already in place in the case of the South Korean economy.

### **Age Composition of the economy.**

Before 1945, the pyramid tended to taper smoothly from a broad base of children aged 0-4 years to a slender apex of the aged<sup>75</sup>. This shape remained till 1960. After 1960, there was a rapid fall in fertility. The age group with the greatest proportion of the population shifted to ages 5-9 years in 1966 & 1970, from 0-4 age group in the previous census years. The age structure reflects the historical events which have affected the population over a period of time. Compared to 1966, in 1970, there was a decline in the number and proportion of those aged between 0-4 and 5-9 years. This could largely be explained by the decline in fertility, which took place in the country after 1960. There was also an increase between 1966 and 1970 in the number and proportion of those aged 10-14 years, reflecting largely the sharp rise in fertility after the Korean war. In 1970, there was a sharp fall in the proportion aged 15-19 over that of the group 10-14 years. This could be attributed to the decline in fertility and rise in infant mortality during the period of the Korean war between 1950 and 1953.

Between 1955 and 1970, the proportion is the under 15 years and in the productive ages 15-64 years recorded fluctuations while those of the aged people remained more or less constant. In 1966 the number is the age group 0-14 years constituted 43.5 per cent of the total population while the proportion of those aged 15-64 years was 53.2 per cent compared to 55.5 per cent in 1955 and 1960. In 1970, the younger age group was somewhat smaller proportion while the proportion is the old age group 65 and over remained stable.

The conclusion that one arrives at is that South Korea has attained the status of developed nation where the third stage of demographic transition is in progress. The rate of growth of population has fallen. The shape of the pyramid is now more bell shaped. The problem in years to come as I see it will be to help the aged population. The dependents will be now of the aged group i.e. 65 years and above.

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<sup>75</sup> Heba Handoursa, "The Korean Model of Development and its Relevance to the Arab World in Mohammed-el-Sayed Salem, eds., *Arbs and the Koreans, Comparative Perspectives on the New Issues*,

**Comparison of the health figures between 1960 and 1990, for**

**South Korea:**

		1960	1990	1992
1	Life expectancy at birth	53.9		70.7
2	Infant Mortality rate (per 1000 live births)	85		25
3	Under 5 mortality			28
4	Population per doctor		370	
5	Annual Growth of population (per cent)	2.3		1.7
6	Fertility Rate			2.4
7	Crude Birth Rate			24
8	Crude Death Rate			5

Source: Country Human Development Indication, UNDP, 1994.

Thus looking at the figures stated above, there has been a drastic decline in all indicators, except life expectancy between 1960 and 1990's but the health and education services were already in place at the time that the

country started on its path of development. The health services were further aided by the economy achieving high rate of growth. The economy was receptive to economic development, which helped in further reducing the fertility rates, reducing the gender bias that existed, which also helped in rural areas accepting both reduction in fertility rates and using the medical facilities to reduce infant mortality rates.

Taking both the Chinese and the South Korean case, one is almost completely sure that for an economy to develop in the shortest time period the (i) role of the state become an important factor and (ii) the role of the state is not only important in achieving high rates of growth as far as economic indicators are concerned, but it is also important in achieving spread and acceptance of social indicators i.e. Health and Education, (iii) It is only when the acceptance of the basic service of health and education are accepted by the population and followed that their benefits are realized and one can then achieve the high rate of growth that both the economies are now realising. The spread of social indicators is a prerequisite for the acceptance and further growth of the economy. This can be achieved only by the efforts of the state. In the economies that I am comparing India with, both had a very strong state policy as regard to both Health and Education. It was uniform throughout the country and

adherence to it was an absolute necessity, unlike India where certain, states have shown a remarkable improvement in health indicators but have not managed to show the same rates of growth as far as economic indicators are concerned. Social and economic indicators have to move together. A base has to be made, for economic development, because both China and South Korea have achieved growth and development with minimum inequalities of income. The extent of inequalities are very minimal in both the economies under comparison.

Looking now at the economic indicators and what have been their achievements in the three economies. Is it correct to say that a minimum level of social indicators existed before the economy moved on the path of development. Under these circumstances what was the role of the State? What was/ is the strategy of development that the economies followed? Are these lessons to be learnt for India?

### CHAPTER 3

#### PATTERN OF GROWTH FOLLOWED BY CHINA , SOUTH KOREA AND INDIA.

In this Chapter an attempt will be made to trace the pattern of growth that the economies of China, South Korea and India followed. It will also try to explain the role played by the state and agrarian reforms that were undertaken during the growth process. But first, it would be appropriate to present an analysis of the economic indicators of all the three economies over the years. Economic indicators are important because their success would, ultimately have an impact on freedoms that people actually enjoy, to lead the kind of lives they have reason to value. Success of development programmes would be judged in terms of their effect on incomes, output and on the kind of lives that people can lead.

Table 1 provides an insight into the basic economic indicators of the Indian economy.

TABLE 1

INDIA'S ECONOMIC GROWTH: 1950-51 TO 1989-90  
Annual rate of increase percent between

\*Source: Basic Statistics relating to the Indian Economy volume I.

	1950-51 to 1960-6	1960-61 to 1970-71	1970-71 to 1980-81	1980-81 to 1989-90
Population	1.9	2.2	2.3	2.1
GNP at market Price (Aggregate)	5.6	10.3	12.2	13.7
Per Capita	3.6	7.9	9.7	11.4
Real National Income (Aggregate)	3.8	3.4	3.0	5.2
Per Capita	1.8	1.2	0.7	3.0
Gross Domestic Savings Total	7.8	12.6	15.5	13.4
Gross Domestic Capital Formation Total	10.3	10.9	15.7	14.1

All India, CMIE, Aug. 1990

Table 1 indicates that there has been a substantial growth of population in India between the period 1960 and 1980 while there has been a slight decline during the decade 1980-1990. There has been an increase in the gross national product (GNP) at market prices, both at the aggregate and at per capita levels, indicating an increase in the share of both the industrial sector and services sector in GNP. For the period 1970-1990, the domestic savings rate and rates of domestic capital formation have been moving together.



In table 2 if one looks at gross domestic product at market prices, there does not seem to be much of a difference indicating that the effect of net exports on the economy was insignificant. It is likely that till the end of seventies the effect of net exports was minimum.

Gross domestic savings for the entire period increased from 7.8 per cent in the 1950s to 13.4 percent in the 1980s. These savings were primarily owing to the increase in household savings of the economy. Prof. W W Rostow in his theory on stages of growth necessary for an economy to develop, has mentioned that for the take off stage a high rate of savings is essential. A high rate of savings leads to a high rate of capital formation, which in turn is important for a high rate of growth of the economy. Gross domestic capital formation on the other hand has almost kept pace with the rate of savings in the economy.

TABLE 2  
INDIA: MAJOR ECONOMIC INDICATORS FROM 1986 TO 1990

	1986	1987	1989	1990
GDP market price (per cent change)	4.6	4.4	5.5	5.4
Gross Domestic Investment (per cent of GDP)	23.4	22.1	22.8	22.8
Gross Domestic Saving (per cent of GDP)	21.6	20.2	21.0	21.0
Inflation Rate (per cent change in Consumer Price Index)	8.7	9.2	7.7	6.7

\* Source: Government of India, Ministry of Finance, *Economic Survey*, 1988-89.

Though India has improved its rate of savings and has made significant strides towards self-sufficiency in food, the country has not been able to achieve high rates of growth. The gross domestic product did reach a level of 5.4 percent in 1990. It has broken what Prof. Raj Krishna called the Hindu Rate of growth, which was pegged at 3.5 percent per annum. But what is also evident is that the rate of inflation went up to 9.2 percent in 1987, but has since come down to 6.7 percent in 1990. Some of the reasons as why the economy has not fulfilled its potential of high rates of growth rates are: inefficiency, inadequate incentives and an overly bureaucratic regulatory apparatus. Exports have increased, but to sustain its momentum it may be necessary to intensify the policy initiatives for

export promotion. It is important that aggregate demand in the economy be contained and that inflation be kept under check by limiting the fiscal deficit. Fiscal deficit is a formidable but not an insurmountable challenge.

The higher the incremental capital-output ratio (ICOR) the less efficiently the countries savings are being utilized. There was a rise in the ICOR till the fourth Plan Period (1968-69 to 1973-74) and then a decline. The ICOR peaked in 1976 then subsequently declined i.e. from 10.5 in 1975 to 5.3 in 1987<sup>76</sup>. Much of the technology used in India is obsolete contributing to high costs and inefficiency. Recent policy initiatives to enhance competition among domestic firms and between domestic and foreign producers should increase the demand for technology development. On the supply side, technology transfer through licensing agreements and foreign direct investment needs to be encouraged by relaxing restrictions on its acquisition.

In the case of India, for the period fifties to mid sixties, the two successive monsoon failures in 1965 and 1966, led to inflation increasing in the mid 1960's. The inflation was partly owing to the droughts and

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<sup>76</sup>Asian Development Bank, "Major Economic Indicators- India" in *Asian Development Outlook*, Phillipines,1989,p117.

partly owing to the two wars of 1962 (with China) and 1965 (with Pakistan) that led to a massive increase in defence expenditure. The government consolidated (state and centre) fiscal deficit peaked in 1966-67 at 7.3percent of GDP<sup>77</sup>.

The adoption of a new set of reforms in the agrarian sector led to an increase in food-grain production and self-sufficiency in food. This also resulted in the increase in household saving rates, which in turn led to an increase in the investment in the economy.

Emphasis on the large public sector in India, during the Second plan was also responsible for inefficiency. This led to a high capital-output ratio as mentioned earlier. This explains why substantial increases in the rate of investment was not reflected in high rates of growth of gross domestic product.

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<sup>77</sup> B Chandra, A Mukherjee, M Mukherjee, *India After Independence*, Viking, Penguin, Delhi, 1999.

Table 3  
 Foreign Trade Statistics for the Indian Economy  
 Average Annual Rates of Growth of Exports  
 ( in current prices at current exchange rates)

Total Exports	1970-71 to 1977-78	1977-78 to 1984-85
Rupee Value (Rs million)	20.3	11.0
Dollar Value (US\$ million)	17.8	6.1

Note: The rupee values have been converted into U.S. Dollars on the basis of annual average conversion factors compiled by the Reserve Bank of India. The Dollar Value are in terms of U.S. \$ million.

Source: Directorate General of Commercial Intelligence and Statistics (DGCI&S), Government of India, Calcutta.

There were three sets of external factors leading to a rapid growth in exports from 1970-71 to 1977-78. First a remarkable expansion in world trade, which was associated with an increase in world import demand for most of India's exportable commodities. Second, there was a boom in the prices of primary commodities leading to a sharp increase in average unit values realized for exports. Third, the oil price increases led to the

emergence of a new market in the oil exporting countries constituting a major source of demand for Indian commodities. These external factors coincided with a set of domestic factors within the economy, which provided a boost to exports. In 1974, while the world economy experienced high rates of inflation, domestic prices in India registered relatively little increase. The growth in exports of primary commodities was a consequence of the growth in agricultural output, an adverse movement in the inter-sectoral terms of trade at home, and the sharp rise in world prices. The growth in exports of manufactured goods on the other hand, was a consequence of sluggish domestic demand and the persistent quasi-stagnation in the industrial sector, which made export sales an attractive proposition, when combined with the higher relative profitability of exports<sup>78</sup>.

The reasons for the trends in the second period that is 1977-78 to 1984-85 were a combination of external and internal factors. The external factors were the following: a near stagnation in international trade flows, a discernible softening of commodity prices in the world market and the economic expansion in the oil exporting countries that slowed down during the 1980s. The domestic factors included the following: the rate

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<sup>78</sup> D. Nayyar, "Indias Export Performance, 1970-1985", Lucas and Papanek, ed, *The Indian Economy Recent Development and Future Prospects*, OUP, Delhi, 1988.

of growth of agricultural production dropped sharply after 1977-78, and showed signs of revival only in 1983-84. This accounts for the stagnation or decline in the volume of exports of primary commodities as also domestic, resource-based manufactures. The price stability of the mid 1970s gave way to substantial price increases in 1979-80 and 1980-81. At the same time, however, inflation in the world economy had dropped to much lower levels. Consequently, there was an erosion in the relative profitability of exports as compared with the earlier phase of domestic price stability and rapid export growth<sup>79</sup>.

TABLE 4  
INDIA – MACROECONOMIC INDICATORS 1990-1995 \*

	1990-91	1991-92	1992-93	1993-94	1994-95
GDP (Annual per cent change)	5.4	0.8	5.1	5.0	6.3
Inflation ( per cent per annum) (Wholesale Price Index)	10.3	13.7	10.1	8.4	10.8
Gross Domestic Investment ( per cent GDP)	27.1	23.6	22.0	21.6	25.2
Gross Domestic Saving ( per cent GDP)	23.7	23.1	20.0	21.4	24.4

\*Source: Government of India, Central Statistics Organisation (1995). National Accounts Statistics, Government of India, Ministry of Finance, Economic Survey 1995-96. CMIE (1995).

<sup>79</sup> D Nayyar, "Indian Export Performance, 1970-1988: Underlying Factors and Constraints," in Lucas and Papanek, ed, *The Indian Economy Recent Development and Future Prospects*, OUP, Delhi, 1988.

Table 4 indicates that there was a sharp decline in GDP (annual per cent change) to 0.8 per cent in 1991-92, with inflation pegged at 13.7 per cent per annum, the highest among the years under consideration that is (1990-95.) The reason being that in the latter period fiscal retrenchment and a credit squeeze were undertaken, combined with a 19 per cent devaluation of the rupee, supported by a stand by credit from the International Monetary Fund. Both agricultural and manufacturing output fell, the former because of erratic weather and the latter because of the agricultural setback, the draconian import controls, and the fiscal contraction. During the period 1991-92, growth of GDP slowed down to 0.8 per cent, and agricultural and manufacturing output fell lay 2.5 per cent and 1.8 per cent respectively. From 1992-93 onwards there was a recovery, initially intermittent, then strong and broad based.

Among others, one of the urgent problems that has to be looked into, is the growing fiscal and revenue deficits.



TABLE 5

Fiscal and Revenue Deficits in Recent Years ( percentage of GDP) \*

Year	Fiscal Deficit	Revenue Deficit
1990-91	9.88	4.42
1992-93	7.19	3.35
1993-94	8.62	4.47
1994-95	7.95	3.87

Source: Government of India, Indian Public Finance Statistics, 1996.

Table 5 shows a high fiscal and revenue deficit since 1990-91. In 1974-75 the fiscal deficit was 4.1 per cent of GDP. Extensive reforms in tax and subsidy would help in reducing the pressures on fiscal deficit and induce a higher growth path<sup>80</sup>. The central and state government ran a subsidy regime which was almost as large as the tax regime, and, both the center and state governments are equally responsible for distortions in allocations and economic inefficiencies. Subsidies, which are the converse of indirect taxes, are indiscriminately given, often not for sound economic reasons<sup>81</sup>. The Indian subsidy regime is large, largely input based, non-transparent, inefficiently targeted and inefficiency inducing.

<sup>80</sup> Joshi and Little, *India's Economic Reforms, 1991-2001*, OUP, Delhi, 1997.

<sup>81</sup> D K Srivastava, "Federal India. Emerging Fiscal and Economic Issues", V S Jafa, ed, *Federal India: Emerging Economic Issues* Indian Tax Institute, Delhi, 1999.

To achieve even some reduction in this sphere would require a lot of political will.

## CHINA

Table 6

### MAJOR ECONOMIC INDICATORS FOR THE PEOPLES REPUBLIC OF CHINA:\*

	1986	1987	1988	1989	1990
G.N.P. (per cent change)	8.3	10.6	11.2	8.0	9.0
Gross Domestic Investment (per cent of GNP)	38.9	38.6	39.6	37.6	37.1
Gross Domestic Saving (per cent of GNP)	33.4	36.6	36.4	34.6	34.8
Inflation Rate (per cent change In Consumer Price Index)	6.0	7.3	18.5	14.0	9.5

Source: Peoples Republic of China, State Statistical Bureau, Statistical Year Book of China (1987,1988,1989,1990), International Monetary Fund, International Financial Statistic, Washington D.C., Feb. 1989.

Comparing the above figures with the 1960s and 1970s in Table 7 we have

TABLE 7

Real GNP growth per cent

	1960-70	1970-80
China	5.2	5.8

It is evident that the reform movement in China had potential to achieve a growth rate of GNP in 1990 at 9.0 per cent. The domestic investment figures have at all times been higher than the domestic savings rate. The Chinese economy is facing high rate of inflation. This was definitely much higher than what India experienced for the same period. Growth has come largely from sheer volumes of investment. The task of policy makers should be now to restrain investment demand rather than to stimulate it. The high investment rate is because of the relative underpricing of investment goods and raw materials, quantitative output targets rather than profitability goals, the under-pricing of capital, the absence of 'hard budget' constraints, the assurance of subsidies to cover taxes and the absence of risk of bankruptcy<sup>82</sup>.

What has been strengthened by the reforms was the contract responsibility system. Under this system the government's contract with the enterprise ensures its responsibilities to make a prescribed

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<sup>82</sup> Asian Development Bank, "major Economic Indicators-China", in *Asian Development Outlook* Phillipines, 1989.

contribution to revenues, rather than its ability to maximize profits. This has encouraged investment in tax generating activities rather than activities that remove supply bottlenecks.

While decentralization has been responsible for much of the dynamism in the economy, it has also created problems such as local protectionism, with localities attempting to restrict the export of raw materials to maintain high prices, and investment in activities in which they do not necessarily enjoy locational comparative advantage. Decentralization by itself would not entail disadvantages, but for the imperfection in the price system, the incomplete state of enterprise autonomy reforms and the fact that indirect macro economic levers of control are still new and are being put into place. The structural reform of enterprises should continue, the key being to distinguish between those enterprises which are willing to operate under hard budget constraints and those which are not. Until progress can be made on these reforms, some interim reliance will have to be placed on direct administrative controls and a limited decentralization in this respect may be desirable.

Factors responsible for inflation are an accommodative income policy, which includes wages, salaries and bonus to workers, that are much

higher than their productivity in recent years. Price and income subsidies to urban consumers have added demand-pull pressures to rising food prices. Export compulsions have also contributed to domestic scarcities. Agriculture, energy and transport are three supply constraining areas, which deserve top priority.

In China, prices were tightly controlled by the government during the 1960s and 1970s. But with the introduction of the reform programme in 1978, the general price level began to increase (see table 6 above). The consumer price index increased by 7.5 per cent in 1980, compared with an annual rate of 0.97 per cent from 1952-78. In an attempt to check the inflation, the government applied a retrenchment policy to reduce the level of investment and control prices. As a result, inflation went down sharply in 1981 through the increase in food surplus and rural reforms.

Inflation occurred for the second time in 1987-88, when the focus of reforms shifted to industry. This occurred even when the Chinese government decided to let the industrial sector be the engine of growth. Till this time period, that is from 1981-1987, the government applied a retrenchment policy to reduce the level of investment and to control prices, the increase in food surplus as a result of rural reforms assisted the

process. In 1984, the 'contract responsibility system' which had succeeded in rural reforms, was introduced in the urban area. While enterprises were given greater control over their earning and investment decisions, they continued to operate under a 'soft' budget constraint under which any losses were made up by government subsidies. It was consolidation of the agrarian sector. The rate of increase in wages and bonuses were substantially above the productivity growth of industrial sector for example in 1978-88, industrial productivity grew at 6.3 per cent per annum, while wages increased at an average annual rate of 9.2 per cent<sup>83</sup>.

The continuance of this type of discrepancy along with the relaxation of tough financial policies in the second half of 1986, led to inflation levels, measured by the consumer price index to reach 20.7 per cent<sup>84</sup>. The main problem that China is facing is that though it has managed to achieve high rates of growth, the manner and extent to which it has allowed the economy to be 'opened' up to the world, has resulted in problems like inflation. For example China currently maintains a double track price system in which planned output is sold at state fixed prices, while goods produced in excess of planned amounts are traded at negotiated market prices. The prices fixed for most industrial products have been irrational that is the relative prices do not reflect true relative scarcities. For

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<sup>83</sup> Asian Development Bank, "Major Economic Indicators-China", *Asian Development Outlook*, Phillipines, 1990.

<sup>84</sup> *Ibid.*

instance, prices of raw materials, energy and transportation have remained unrealistically low. This enabled the government to implement the low income, low consumption, high employment policy which fulfills the official objective of egalitarianism

Thus we find that though the Chinese economy progressed rapidly, it still has a number of problems to overcome, the main one being the transition from a centrally controlled economy, following a socialist pattern of society, to one where the economy has to open up to the world, and where market forces will decide the prices of various products and prices of various factors of production.

### K O R E A

A Look at the economic indicators of Korea provide the following conclusions:

TABLE 8  
Economic Indicators – Korea \*

	1955	1963	1970	1973
Nos. of people (million)	21.6	27.0	31.4	32.9
Av. Annual growth rate (Refers to the period from the previous bench mark year per cent)	-	2.8	2.2	1.6
Average Annual Growth Rate (refers to the period from the previous bench mark year, per cent)	-	1.6	7.7	8.9

\* Source: Year Book of National Accounts Statistics, UN, 1986, Pattern of Development Research Project Data Bank, the World Bank.

Table 8 indicates that the Korean economy started on its path of growth in the 1960s. The rate of growth of population of the economy was high, and could be even compared with India and China. But a quantum jump took place during the period 1963-1970, when per capita gross national product increased from 1.6 per cent in 1963 per annum to 7.7 per cent in 1970 and 8.9 per cent in 1973. This rise continued till 1988, as is shown in the table 9

TABLE 9

Major Economic Indicators – South Korea \*

	1986	1987	1988
G.D.P. (per cent change)	11.7	11.1	11.0
Gross Domestic Investment (per cent of GDP)	28.8	29.1	30.2
Gross Domestic Saving (per cent of GDP)	33.6	36.5	38.4
Inflation rate (per cent change in Consumer Price Index)	2.8	3.1	3.1

\* Source: Bank of Korea, Monthly Statistical Bulletin (Seoul), Financial Statistics in Korea, Government of Korea, (1988).



What we see in the Table 9 brings out clearly a continuance in the rate of growth of gross domestic product, high rates of growth of both savings and investment and a controlled rate of inflation. Thus it seems that the Korean economy has been able to control its inflation rate in a much better manner than China.

The Korean economy followed an export led growth. Initially, the instruments used for export promotion were highly discretionary. Support for exports were consciously channeled through the state controlled banking system. This was the system followed since 1961-73.

Buoyed by the success, the government later turned towards accelerating the structural change in the industrial sector by directly promoting the development of the heavy and chemical industry sector. Thus, one sees a change in the direction of approach, largely due to the changing world scenario. The Korean economy, with an autocratic government, decided on an export led growth path, and consciously took advantage of changing world trends. The mandate of the Korean government was the production of competitive commodities, Korea was able to achieve this because it had cheap labour facilities and it also had an existing educated

labour force. Along with this a highly committed government helped achieve high rates of growth of the economy.

Trying to look at all the factors responsible for high rates of growth of all the three economies would be beyond the scope of my dissertation.

However, the most important factors, which I think, are responsible include:

- (1) Role of the State
- (2) Agrarian Reforms

Both these factors have an extremely important role to play in deciding the path as well as the extent to which reforms in the other sectors are accepted. These two factors along with the reforms in the education and health sectors, are essential in achieving high rates of growth.

### Role of the State

In the case of the Chinese economy, in 1949, the new Communist regime inherited an economy that was in shambles as a consequence of World War II, the civil war, and the mismanagement of its Guomindang

predecessors. Between 1949 and 1952, the new regime proved highly successful in restoring agricultural and industrial output, controlling inflation and restoring confidence in its currency. In 1949, the state sector accounted for 34.7 per cent of China's industrial capacity. But by 1952, the share of state-owned industry had risen to 56 per cent of the gross industrial output value<sup>85</sup>. The strengthening of the state sector in industrial production was accompanied by the state assuming a dominant role in wholesale trade. By the end of 1952, the state assumed a dominant role in wholesale trade and industrial production, land reform had been completed and agricultural output had been restored to previous levels.

It is after 1952 that China embarked on its planning process. During the first Five Year Plan Period that is (1953-57), state and joint state private enterprises continued to grow in importance relative to private ones, which had disappeared by the end of the period. Very much like India, the failure of the agricultural sector to provide adequate help in the form of linkages of both demand and supply type, led to the slowing down of growth in China from 1958-60, leading it to bring about a "Great Leap Forward" (GLF) strategy. The main aim of the GLF was to raise the

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<sup>85</sup> V Lippit, *The Economic Development of China*, An East Gate Book, M E Sharpe, Inc. Armonk, New York, 1987.

output of the agricultural sector from labour-intensive industries and by reorganizing the socio-economic structure of the rural areas of the country. The main emphasis was on the reorganization of the agricultural sector, which will be discussed in detail in the next section. During the GLF period, every action was politicized, economic rationality was cast aside, and political gain became the keyword behind any action.

This led to the emergence of a bureaucratic-technocratic elite dominating a rationalistically organized society in which ideology and solidarity would play secondary roles, and the pursuit of individual benefit the primary role in motivating economic and social activity. Mao in order to retain his position in the party launched the Cultural Revolution in 1966. It was during this period that complete politicization of the Chinese society took place. The gang of four led by Jiang Qing (wife of Mao Zedong) saw the world in terms of black and white. White being the socialist path and black the capitalist path. During this period, people were expected to work for the good of society rather than material gain. This is the period during which collectivization of the agricultural sector, the barefoot doctor programme and various other health schemes were put into place. To achieve all this, the Chinese people found themselves cut off from the outside world, and many people were subjected to

vigilant action and physical abuse. The system changed after the death of Mao in 1976, and 1978 saw the beginning of the reform period under Deng Xiaoping.

During this period, ideology took a back seat while economic modernization came to the fore. After two decades of slow and uneven progress, living standards improved China started opening up to the world market, decollectivisation of the agricultural sector, and the breakdown of the bare foot doctor programmes were part of the transition that took place after 1978<sup>86</sup>.

But along with the opening up of the economy, the new problems that were being faced by the economy were in terms of increasing inequalities of income, health became a paid service, thus to some extent the health related services also started suffering. As the economy was neither wholly capitalist, nor socialist, there would be inherent problems in the bureaucrats accepting liberalization, and allowing the market forces to work<sup>87</sup>.

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<sup>86</sup> V Lippit, *The Economic Development of China*, An East Gate Book, M E Sharpe, Inc. Armonk, New York, 1987.

<sup>87</sup> Gang, Perkins, and Sabin, "China: Economic Performance and Prospects", *Asian Development Report*, Studies of Asian and Pacific Economic Issue, Vol, 15, Nos. 2, 1997.

The key element in the reform movement was turning economic decision-making over to the direct producers, workers and managers in both industry and agriculture.

The Peoples Republic of China has experienced a vast plethora of reform movements, each era ridden with some positive and some negative factors. The type of governance during Mao's regime strengthened the agrarian system, health system and to some extent the education system, but all this was achieved at a cost. The loss being in form of the draconian measures being used to pursue their goal. Subsequently in 1978, when the economy was allowed to open up, the change was so drastic that growth, in the form of economic indicators was phenomenal. But it is not to say that the economy was without problems. During the course of economic development additional problems in the form of inequalities of income, and high inflation, might have slowed the country's rate of growth; these are problems that should be addressed by additional policy measures. The list of reforms that are only partially completed is a long one. The reform of the banking system and the state owned enterprise had just begun. The PRC's step-by-step approach to reform served it well during the eighties and nineties, and it might still be appropriate in some sectors and with some institutions.

In the case of the Korean economy, the role of the state really manifested itself after Brigadier General Park Chung Hee came to power. This was a new era in the political and economic history of Korea. The most powerful economic institution that was created was the Economic Planning Board. What really distinguished the planning process in Korea from other developing countries was not so much the formulation of the plans but their implementation.

Economic planning in Korea was characterized “by a high level of coherence between decision making and decision-implementation process”<sup>88</sup>.

In Korea, the promotion of imports was much more than assigning high priority to exports through a regimen of incentives and disincentives. It was assigning absolute priority, which involved an all out, continuous, concerted and coordinated effort by the state to realize the targets within a given time frame. All the power the state could command was exercised to achieve the targets. It was made to appear that the very survival of the

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<sup>88</sup> Jang Jip Choe, “ The Strong State and Weak Labour Relations in South Korea: Their Historical Determinants and Bureaucratic Structure”, Park Cheng Kee,ed, *Macro Economic and Industrial Development in Korea*, Korean Development Institute, Seoul, Korea,1980.

regime, the economy and the state depended on achieving the export as well as the plan targets.

TABLE 8

Economic Indicators – Korea \*

	1955	1963	1970	1973
Nos. of people (million)	21.6	27.0	31.4	32.9
Av. Annual growth rate (Refers to the period from the previous bench mark year per cent)	-	2.8	2.2	1.6
Average Annual Growth Rate (refers to the period from the previous bench mark year, per cent)	-	1.6	7.7	8.9

Source: Korea Statistics Year Book , Seoul, 1975

The state never allowed a reconsideration of targets because of pressure from any quarter domestic or external, inter-ministry or inter-firm rivalries. In fact, no manufacturer or exporter dared to challenge the export priorities or targets set by the state during the Park Chung Hee era. This was because of a fusion of two factors, fear and fervor – fear of the state and export fervor. The latter was a manifestation or internalization of economic or



developmental nationalism<sup>89</sup>.

In the early 1960s came an era of rapid economic growth. The Korean economy had grown at a real annual compound rate of 4.2 per cent during the period 1953-1962. By contrast, the economy has been growing at over 10 per cent per annum since 1962<sup>90</sup>.

The critical factor explaining the different rates of growth experienced during the two periods was the degree of commitment by the leadership to economic growth. The strong commitment by the leadership towards the export led development, in the post 1960 era naturally resulted in more active government involvement in the economic field. Under President Park Chung Hee's leadership, the public sector grew in both absolute and relative terms during the post 1960 era. When the Korean economy started growing fast in the early 1960s, the government was not only a growth promoting catalyst, breaking serious bottlenecks for the private sector but an entrepreneurial and/or managerial substitute in the areas where private initiatives were most lacking for example large manufacturing projects.

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<sup>89</sup> R D Norton and Seung Yoon Rhee, "A Macro Economic Model of Inflation and Growth", Heng Kee Park, ed, *Macro Economic and Industrial Development in Korea*, Korean Development Seoul, Korea.

<sup>90</sup> R R Krishnan, "The State and Economic Development in Korea", Sharma and Dal Coong Kim, ed, *India- Tryst with Changes and Development*, Khanna Publishers, New Delhi.

The Korean growth has not been based on natural resources as is the case in some oil rich countries. It has been primarily human resource based. Korea's growth strategy has been outward looking and its growth has been export led.

Korea's gross domestic product increased at the annual rate of over 10per cent between 1965 and 1975; Its manufacturing sector grew at 22.4per cent annually<sup>91</sup>.

The electronic industry in Korea is the fastest growing industry. There were three salient stages in the development of industrial technology in the electronics industry in Korea.

- 1) Implementation
- 2) Assimilation
- 3) Improvement

During the initial stage, the immediate technical task was to make use of the transferred foreign technology in order to produce products whose technology and market had been tested and proven elsewhere.

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<sup>91</sup> L Kim, "Stages of Development of Industrial Technology Sector", Park Chung Kee,ed ,*Macro Economic and Industrial Development in Korea* Korean Development Institute,Seoul,Korea, 1980:

Government policy was of major influence in two areas. (i) the transfer of foreign technology and the establishment of industry occurred when the government implemented import substitution and market protection policies and, (ii) various government incentive programmes were also perceived as important stimuli for technical changes by industry. Multinational firms played an important role in establishing the industry as suppliers of technology, technical personnel, capital equipment and component parts<sup>92</sup>.

Over the years there has been a marked shift in the emphasis on different industries in the Korean economy.

Looking at the sector wise break-up for 1975, 1985 and 1992, we find that

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<sup>92</sup> Iyanatul Islam and Aris Choudhury *Newly Industrialising Economies of East Asia, Republic of South Korea, Asia Pacific Economies- A Survey*, London, 1993.

TABLE 10  
SECTOR-WISE BREAK-UP FOR 1975, 1985 AND 1992\* for South  
Korea.

(in percentage terms of Gross National Product)

Sector	1975	1985	1992
Agriculture	24.1	12.8	7.1
Industry	32.5	41.9	46.2
Manufacturing	22.5	30.3	33.8
Services	43.5	45.3	46.7

\*Source: Key Indicators. Asian Development Bank, Manilla, Phillipines, 1994.

There is an overlapping between Industrial and Manufacturing Sectors, which is why the total for all the years add up to more than 100.

Table 10 brings out the fact that the percentage of agriculture in gross domestic product, has been declining, and there has been a corresponding increase in the industrial and manufacturing sectors.

Over the period 1963-1987, employment in the farm sector decreased by 3.6per cent annually since 1980, while non-farm employment steadily increased over the entire period. In particular, employment in mining and manufacturing industries grew at 8.7per cent per annum over the entire period. The overall unemployment rate declined from 8.1per cent in 1963 to 3.1per cent in 1987<sup>93</sup>.

In the 1960's the emphasis was on light and labour intensive manufacturing which laid the foundation of Korean industrialization. In the 1970s, capital intensive activities such as machinery, transport equipment, ship building and defence related heavy industries were given importance; while in the 1980s, it was high technology industries which were given greater importance<sup>94</sup>.

Dr Amsden<sup>95</sup> has argued that direct intervention and subsidies have always played a crucial role in Korean economic policy. In conjunction with a highly politicized process of industrial licensing and long-term credit allocation, subsidies have been used to guide economic behaviour. Export targeting has provided the government with a device to discipline the subsidy recipient. Korea relied on foreign markets to absorb its

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<sup>93</sup> Soo Kon Kim, Jae Won Kim, and Chonsum Ihim, *Republic Resource Policy and Economic Development, Selected Country Studies*, Asian Development Bank, Manilla, Philipines,

<sup>94</sup> *ibid.*,

<sup>95</sup> Alice H Amsden, "Under Stabilization and Adjustment Policies and Programmes. Country Study, Republic of South Korea", *World Institution for Development Economic Research of the United Nation University*.

exports. It also used the market mechanism under certain conditions to discipline firms. But it never embraced the market mechanism as a rule of thumb.

The Korean government has been interventionist especially in controlling of enterprises, financial institutions and foreign exchange. The government also played a crucial role in adjusting the scale of the market incentives while pursuing its desired economic and social objectives<sup>96</sup>.

Economic Development in Korea and elsewhere is accompanied by massive shifts of human resources from agriculture to the manufacturing and service sectors. This requires that adequate employment opportunities

Should be provided for the people. In Korea this was ensured by the emphasis on labour intensive technology in the manufacturing and industrial sector, and also the simultaneous development of a skilled, technically educated work force, which was part of the capital formation of the country.

Taking the case of the role of state in the case of India, we find that at the time of Independence, the regeneration of the Indian Economy became a

pronounced aim of the freedom struggle with planning as an effective way of achieving it. Besides, industrial development, the national leadership had other concerns like the removal of age-old social inequalities with which Indian society was riddled. To alleviate the widespread poverty in the country and to make economic growth consistent with social justice, government intervention on an increasing scale was believed to be necessary. India to set out its planning process in the form of five year plans. The first five year plan (1951-56) essentially tried to complete the projects at hand and to meet the immediate crisis following the end of the War. It was with the second five year plan (1956-61) that Prof. Mahalanobis placed emphasis on the capital goods sector as the 'commanding height' of the economy in order to achieve high rates of growth. A basic element of this strategy was the rapid development of heavy and capital goods industries in India, mainly in the public sector. The shift in favour of heavy industries was to be combined with promoting labour-intensive small and cottage industries for the production of consumer goods. But while the third plan was in progress, there were some external incidents, e.g. armed conflicts with China and Pakistan, and two consecutive droughts in the country whereby the gross domestic product fell. This is the time when the U.S.A. the

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<sup>96</sup> Iyanatul Islam and Anis Choudhry, *Republic of Korea-Asia Pacific Economies. A Survey*. London, 1993.

most important donor at that time, decided to suspend its aid in response to the Indo-Pak war (1965), and also to renew the PL 480(wheat loan) agreement on a long term basis. The U.S., the World Bank and the IMF wanted India to a) liberalize its trade and industrial control, b) devalue the rupee and c) adopt a new agricultural strategy (which was successfully implemented). The devaluation of the rupee and trade liberalization initiated by Mrs. Indira Gandhi in the mid-sixties got associated with the continuing recession in industry, failure of exports to pick up, and exogenous circumstances like the drought of 1966-67<sup>97</sup>. Public Sector: The regulatory regime imposed in industry had lasted much longer than was required and the Public sector enterprises which controlled a major part of investment in industry and infrastructure failed to augment the revenues of the state and provide resources for further development in newer areas. The answer was now to move away from directives, regulations and controls and to place a greater emphasis on market incentives and indirect policy instruments. Since the mid eighties and more so after 1991, greater importance was attached to productivity, competitiveness and technological modernization. The process of reform involved an immediate fiscal correction, liberalization of trade and industrial controls such as free access to imports, a considerable dismantling of the industrial licensing system and the abolition of the

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<sup>97</sup> Chandra,A Mkhherjee,M Mukherjee, *India after Independence*, Viking, Penguin,Delhi,1999.



Monopolies and Restrictive Trade Practices Act (MRTP), reform of the public sector including gradual privatization, reform of the capital markets and the financial sector, removal of a large number of the restrictions on multinational corporations and foreign investment and encouraging foreign direct investment and so on. The result of these reforms, was an increase in the India's gross domestic product from 0.8 per cent in 1991-92 to 5.3 per cent in 1992-93 and 6.2 per cent in 1993-94, industrial growth rate picked up to 2.3 per cent in 1992-93 to 6 per cent in 1993-94 and 12.8 per cent in 1995-96<sup>98</sup>.

One sees then that the type of governance in all the three economies were entirely different. In the case of China and India, the move towards opening the economy to the outside world, has definitely had a positive effect on the growth rate of gross domestic product and industrial growth rates. But both the economies are faced with different set of problems. In the case of China, the control of the government still exists as compared to either India or South Korea, they have a problem in controlling the inflation rate, and also the extent of social inequalities which have crept into the system which were not in existence earlier. In India we have the problem of inadequate spread of education and health facilities, poverty levels, and growing fiscal deficit. In India there is a

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<sup>98</sup> P N Dhar, "The Indian Economy Past Performance and Current Issues", Lucas and Papanek, ed, *The Indian Economy Recent Developments and Future Prospects*, OUP 1988.

problem in trying to maintain a balance between good economic sense and sound political sense. The two have to move in tandem, because all round economic policies do exist on paper, the problem is proper implementation, which is more often than not held up because of various political reasons.

Turning next to the second most important factor, which I feel is responsible to a large extent in the high growth rates of the economies, namely agrarian Reforms. Taking the case of China first we see that land reforms had started before 1949<sup>99</sup>. Between 1946 and 1957, led by the Communist Party, a thorough going land reform was carried out in the villages of China in which the economic power of the landlord class was broken and two fifths of the total arable area was confiscated and redistributed. As far as collectivization of agriculture was concerned, the Chinese government in the early 1950's emphasized that the process should be gradual, 'step-by-step' and voluntary.

To quote Mao from his speech on agriculture co-operatization in July 1955<sup>100</sup>; "The first step was to call on the peasants to organize agricultural producers mutual aid teams, which contained only certain

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<sup>99</sup> V Lippit, *Land Reform and Economic Development in China*, An East Gate Book M E Sharpe, Inc. Armonk, New York, 1987.

rudiments of socialism, comprised of, from a few to a dozen households each, and to do so in accordance with the principle of voluntary participation and mutual benefit.

The second step has been to call on the peasants, likewise in accordance with the principles of voluntary participation and mutual benefit, to organize on the basis of their mutual-aid-teams, small agricultural producers' co-operatives, which are semi-socialist in nature and are characterized by the pooling of land as shares and by unified management.

The third step will be to call on the peasants in accordance with the same principles of voluntary participation and mutual benefit, to unite further on the basis of these small semi-socialist co-operatives and organize large. These steps make it possible for the peasants, gradually to raise their socialist consciousness through their personal experience and gradually to change their mode of life, thus lessening any feeling of an abrupt change”.

About the relationship between the institutional and technical transformation of agriculture, in the same speech, Mao said “In

agriculture, with conditions as they are in our country co-operatives must precede the use of big machinery”.

We believed that even without large supplier of modern inputs, output would increase in the collective because :

- 1) Land consolidation would increase the arable area and allow a more rational cropping pattern, and
- 2) Collectives would be able to accumulate capital faster through mobilization of labour for large-scale construction work and through collective control over income distribution between consumption and investment<sup>101</sup>.

Subsequently the first peoples commune in the Agricultural sector was set up in April 1958. Initially the communes were organized at three district levels<sup>102</sup>.

- 1) Production teams

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<sup>101</sup> Patnaik U, “ Three Communes and a Brigade. The Contract Responsibility System in China”, A Mitra, ed, *China Issues in Development*, Tulika, New Delhi, 1988.

<sup>102</sup> Nolan Peter, “Collectivisation in China: Some Comparisons with USSR”, *Journal of Peasant Studies*, Vol3, No.2, Jan 1976.

- 2) Production brigades
- 3) Commune Level
- 4) Household

Initially, responsibility and authority were concentrated at the commune level. Income distribution was also at the commune level based in part on labour contribution and in part on need.

The division of the agricultural sector into communes, did not immediately result in higher output. This can be seen from the table given below.

**FALL IN AGRICULTURAL PRODUCTION ASSOCIATED WITH THE GREAT LEAP FORWARD\***

(Mill. Tonnes)

Year	Grain	Cotton	Sugarcane
1957	195	1.6	10.4
1960	143.5	1.1	8.3
1962	160	0.8	3.4

\*Source: U.S. Dept. of Agriculture (1982)

The regime blamed the precipitous decline in agricultural production, during these years on unprecedentedly unfavourable climatic conditions, however it is clear that the adventurism of its own policy i.e. reorganizing the countryside on a massive scale and imposing new demands on it simultaneously without adequate experimentation, preparation or analysis, was primarily to blame<sup>103</sup>. Therefore in 1962, major reforms were brought about in the commune structure. These were:

- 1) The main unit of collective ownership, work organization and income distribution was to be the production team. This was a small sub unit of the commune containing in the early 1960's an average of only about twenty-four households.
- 2) The intermediary production brigades. Each of these contained about eight to nine production teams in the early 1960's and the communes had their economic functions considerably curtailed.

They were confined to the ownership of relatively large agricultural means of production, organizing large scale mass

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<sup>103</sup> Lippit V, *The Economic Development of China*, pp201-223, An East Gate Book, M E Sharpe, Inc. Armonk, New York, 1988.

construction projects, operating larger non-agricultural enterprises, health and educational institutions and allocating state purchasing quotas to production teams.

- 3) Collective income for allocation to commune members was to be distributed mainly, according to work, and only a portion of the grain distribution was to be, according to need.
- 4) Commune members were permitted to cultivate a private plot, which was generally to account for 5 – 7 per cent of the team's total cultivated area, to own small farm animals and to have grazing land set aside for them.

The process of land reform after Independence in India basically occurred in two broad phases. The first phase which continued till the early sixties focused on the following features: (1) abolition of intermediaries – zamindars, jagirdars, etc. (2) tenancy reforms involving providing security of tenure to the tenants, decrease in rents and conferment of ownership rights to tenants, (3) ceilings on size of land holdings, (4) co-operativization and community development.

The abolition of zamindari meant that about twenty million erstwhile tenants now became land owners. A rough estimate indicates that the area under tenancy decreased from about 42 per cent in 1950-51 to between 20 to 25 per cent by the early sixties.

The issue of continuing tenancy in zamindari areas, oral and unrecorded, remained even after abolition of zamindari was implemented. The second major plank of the land reforms envisaged was concerned with tenancy legislation. The political and economic conditions in different parts of India were so varied that the nature of tenancy legislation passed by the different states and the manner of their implementation varied a great deal. But the actual experience of implementation of the tenancy laws was very complicated. The objective of tenancy legislation, which was to provide security of tenure to all tenants met with only limited success.

As for the third objective of tenancy legislation in India, i.e. the acquisition of ownership rights by tenants, this too was achieved only partially.



The result of both the phases of land reform<sup>104</sup>, were commendable though much still remained to be done. Radical scholars like Daniel Thorner and other observers reported on the basis of field surveys, a qualitative change in the lives of the rural poor. The land reforms, the spread of the green revolution to most parts of the country, the anti-poverty programmes, particularly since the last sixties, have provided succour to vast masses of the rural poor in India. All this was achieved in a democratic set up. This was unlike China who achieved its successes through the imposition of a draconian one child policy, the excesses of the cultural revolution and the frequent violation of human rights<sup>105</sup>.

To increase the productivity of the agricultural sector, the second set of reforms were developed i.e. the spread of the Green Revolution Strategy. Improved crop varieties and chemical fertilizers have substituted for an inexorably diminishing land frontier<sup>106</sup>. Government investment in agriculture rose significantly. Public investment institutional credit, remunerative prices and the availability of the new technology at low prices raised the profitability of private investment by farmers and as a result the total gross capital formation in agriculture began to grow faster.

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<sup>104</sup> Chandra, A Mukherjee, M. Mukherjee, *India After Independence*, Viking, Penguin, Delhi, 1999.

<sup>105</sup> Dreze and Sen. *India Economic Development and Social Opportunity*, OUP, Delhi, 1995.

<sup>106</sup> P N Dhar, "The Indian Economy: Past Performance and Current Issues", Lucas and Papanek, *The Indian Economy Recent Development and Future Prospects*, OUP, Delhi, 1988.

Between 1967-68 and 1970-71 food grain production rose by 35 per cent, between 1964-65 and 1971-72. Food availability continued to increase sharply to 110.25 million tonnes in 1978 and 128.8 million tonnes in 1984<sup>107</sup>. By the eighties, India was self sufficient in food with buffer food stocks of over 30 million tones. It was this comfortable situation which enabled India to successfully deal with severe and widespread droughts of 1987 and 1988 without large scale foreign help as was needed in the mid sixties. By the end of nineties, the food grain production is at 3 per cent, while population growth rate is 1.8 per cent<sup>108</sup>.

Thus what we achieved in India was the type of agrarian reforms which increased the productivity of the soil, but though high levels have been achieved for over two decades, it has not been translated into high gross domestic product for the economy.

But the development of the Agrarian sectors in the case of South Korea and China have led to higher rates of growth of gross domestic product.

Thus we see, that the agrarian reforms which took place in India in two phases, (as mentioned earlier in the chapter), led to a fall in poverty levels with relatively faster economic growth in the eighties. In the case of

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<sup>107</sup> *Ibid.*

<sup>108</sup> Chandra, A Mukherjee, M Mukherjee, *India After Independence*, Viking, Penguin, Delhi, 1999..

China the post reform expansion (after 1979) benefited from the land reform movement undertaken during pre-reform period. The process of collectivization (during the pre-reform period) had abolished landlordism in China, through a process that was often quite brutal. Thus when the Chinese government opted for the responsibility system in the late seventies, the country had a land tenure pattern that could readily support individual farming without the social problems and economic inefficiencies of a highly unequal land ownership as was the case in India. In the case of Korea, too, the land reform movement that took place before the sixties, enabled it to achieve high levels of development. But here too, it was the American occupation forces which over threw the landlords, and land was re-distributed to the tiller. This reform redirected idle capital away from land speculation to manufacturing and uprooted a class that had not proved itself progressive.

It relieved the bottleneck in food supply which in turn dampened inflationary pressures. It created a far more equitable income distribution.

The draconian manner of redistributing land in China and Korea led to more equitable income distribution at that time, while India, with its

reform movement matched the productivity in the agrarian sectors of the other two countries, it could not match them in terms of income distribution. But inequalities of income is still acceptable rather than giving up the democratic systems of governance.

## Conclusion

My dissertation has focused on the effect of social indicators on economic development, my aim was to arrive at some policy conclusion for India. To arrive at some result I looked at the path of development for China and South Korea.

The result as I see them, seem to be that education is an extremely important aspect. For any country moving on the path of development, education has to be emphasized. This leads to the release of an educated work force from the agricultural sector. Prof. Kuznets had shown conclusively that there is a positive relationship between the growth of gross domestic product and the sectoral share of industry and conversely, a declining sectoral share of agriculture. But for the industrial sector to develop what it needs is an increase in supply of an educated workforce. This is what has been proved in the case of South Korean economy, where by Korea's literate and entrepreneurial labour force represented a very attractive endowment for industrial development.

In the case of South Korea, what was already in place, before it embarked on an export led growth path, was its education programs, health programs and land reforms. It was on this foundation that the economy

was able to achieve a rapid transition from an agrarian economy to an industrial economy, and from a rural to an urban economy. It chose the path of an export led growth path, during the 1960's, and the strong performance of the industry directly helped to accelerate agricultural growth, initially through demand effects and later by supplying capital and other resources to increase production capacity. The surplus labour from the agricultural sector, as there was technically qualified were employed easily in the growing industrial sector, this helped the growing industrial sector, and helped to raise the agricultural incomes by relieving the sector of its marginally employed workers, and keeping the levels of inequality in check. The rapid industrial growth led to increasing incomes differentials between rural and urban households, the government quickly adopted policies that helped to increase agricultural incomes and distribute the benefits of industrial growth.

This brings me to my next factor namely the role of the government in South Korea. Critical to the success of the Korean industry was the single minded pursuit of exports, which was spurred by the government intervention in ensuring a rationalized exchange rate regime, strong import incentives, selective import liberalization directed credits and a host of finely-tuned export promoting instruments in the 1960's and

1970's. Government intervention was to such a large extent that, following government directives banks increasingly used export performance as the criterion of credit worthiness. Access to bank credits was important since the bank lending rate was substantially below the cost of borrowing in the alternative curb market, protection of the domestic market in industries with poor export prospects, world market pricing of inputs and outputs across different export products etc.

So is the case for China, where the growth path that the Chinese economy followed, was one of development of the education standards, health standards and emphasis on agrarian reform. A communist government at the helm aided all this. But as seen from earlier chapters the development that was achieved by China in the late 70's and early 80's could only be achieved because the major areas of education, health and agrarian reforms were in place.

I agree that the manner in which the above were achieved in both economies is not what India can follow, given its commitment to follow a type of governance which is sovereign, and democratic but what comes out very clearly in my analysis, is that the three areas which have to be emphasized, before a substantial growth is achieved in economic

indicators are 1) Education 2) Health and 3) Agricultural sector. Taking the system of education first, one finds that as India is a vast and varied country, a uniform policy cannot be adopted all over India. Education being a state subject in India, each state given its different circumstances should adopt different policy measures to achieve its goal. The basic goals for all the states are:

- (i) increase in female literacy levels and reduction in the gender gap.
- (ii) increase in the enrollment figures, as well as the retention of children at the primary levels of education.
- (iii) decentralization of decisions as far as local schools are concerned, so that problems are located and solved as fast as possible.

Some of the hurdles in implementing these goals, besides lack of finance, are the sociological-cultural set up of various states. This at times is manifested in caste barriers, which prevent the reduction in the gender gap. But on the other hand there have been various states in India e.g.



Kerala, Tamil Nadu and recently Himachal Pradesh, which have been able to overcome these problems, and have achieved higher literacy levels. As far as Health in India is concerned, we have seen a drastic reduction in mortality figures, increase in the life expectancy age and recently there has been a slight drop in the rate of growth of population to about 1.8 per cent. The policy measures that have been adopted have not been effective enough, to result in an overall drastic decline in infant mortality rates and rate of growth of population, as is seen in the case of China. In China it was possible because of the type of government it had and still has, but India can still achieve it, though may be at a slower rate if it emphasizes on female literacy levels, developing agro based industries, which in turn are able to generate employment opportunities that would employ the surplus from the agrarian sector, spread of health facilities, to name a few.

It seems that both education and health figures are inter-related, indicating that the increase of the former would automatically reflect in the decrease of the latter and vice versa. These two are important because as the economy progresses on the path of growth, what is required is an educated, healthy labour force. During the course of development there is going to be a release of labour force from the agricultural sector. If this is an educated

skilled man power, then it is an asset to the nation, as was the case in South Korea, and this would further lead to an increase of industrial growth levels.

The land reform in South Korea and China helped the process of development of social indicators like education and health. In India despite the land reforms the social and economic inequity has considerably inhibited improvement in education and health which are emerging as an important bottleneck in the path of rapid development in the future.

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