

GLOBALIZATION AND HUMAN CAPITAL FORMATION: THE INCREASING ROLE OF
MULTINATIONAL CORPORATIONS IN INFLUENCING HIGHER EDUCATIONAL
POLICIES OF DEVELOPING COUNTRIES.

by

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(Under the Direction of Han Park)

ABSTRACT

The spread of the forces of globalization have significantly affected the modern world. Thus, in this dissertation I attempt to identify how multinational corporations have negatively influenced human capital development in developing countries such as China and India. In order to answer this research question I adopted both qualitative and quantitative methodology. Initially I resolved the question of causality i.e. multinational corporations through the mode of foreign direct investments do have an impact on the economy of India and China and hence will play an important role in influencing the higher educational policies of both these states. Post this I evaluated the cases of India and China. In the case of India, I observed that the higher educational policy of the country has changed in order to meet the manpower requirements of multinational corporations. Such a policy has resulted in growth of the rich-poor divide as well as increased rural to urban migration resulting in growth of social conflict. Furthermore, on the evaluation of the case of China I found out that, irrespective of the regime type and culture the agents of globalization i.e. multinational corporations have also had an impact of the higher educational policy of China. I observed that post the liberalization of China's economy and the entry of multinational corporations; the higher educational policy of the country also changed in order to meet the manpower requirements of these multinational corporations. Such an educational policy has not only resulted in an increase in educational institutions but also the number of students with graduate degrees. However, this situation has also resulted in an increase in graduate unemployment levels resulting in an increase in social tensions within the society. Finally I identified the factors because of which multinational corporations have had an influence on the educational policies of these two states and concluded with how the dissertation adds to the theory and also has policy relevance.

INDEX WORDS: Globalization, Education, Multinational Corporations, Human Capital Development, Foreign Direct Investment, China, India and Sustainable Development.

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DEDICATION

I would like to dedicate this dissertation to my parents Veena Singh and J.P. Singh, my brother Bhawani Singh and my wife Swati without whose encouragement and support this work would not have had been possible.

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Chapter 1

INTRODUCTION

1.1 Introduction

Post the Second World War the world witnessed numerous political and economic changes. Not only did a large number of new states come into existence but also there was a significant increase in terms of global trade. This increased global trade and commerce resulted in the growth of a trend which we now call globalization. One major aspect of globalization has been the growing role of multinational corporations (MNC's) in developing countries and their impact on the economic development of these countries. Although the literature on globalization and economic development highlights numerous factors that play an important role in bringing about development, but one idea that is common among a majority of the scholars is the role of human capital. According to these scholars, one factor that can help promote sustainable development in developing countries is the productive utilization of human capital. In addition, the literature also goes on to suggest that the educational policies play a very important role in bringing about a creation of human capital. Thus, in my dissertation I propose to build on this idea and evaluate the role of multinational corporations through the mode of foreign direct investment (FDI) in influencing the higher educational policies of developing countries.

In order to answer this research question I plan to first of all conduct a literature review showing the theoretical background on which my dissertation is based. Post this, I will propose my own explanation of how multinational corporations influence the higher educational policies of a state and formulate the corresponding hypotheses. In my research I

plan to use both qualitative as well as quantitative methodology, and apply it to the case of India and China to test my hypothesis. Finally, I will conclude with an analysis of why the educational policies of these two countries, that lack any similarity in either culture or institutions or political systems, has been impacted by multinational corporations and how my dissertation adds to the literature as well as is policy relevant.

1.2 Research Question

With the growth of globalization the multinational corporations have emerged as a major player in the domestic and foreign policy formulation by states. Authors such as Vernon (1971), Ray (1972), Kaufman (1977), Korten (1995), Richani (2002), Rondinelli (2002) and Cohen and Kupcu (2005) have all found evidence to suggest that multinational corporations have a significant influence on the domestic and foreign policy choices made by a state. As multinational corporations are responsible for creation of wealth and work opportunities in a state they create strong interest groups that not only support them but also aggressively push their agenda. Thus, these multinational corporations end up playing a very deciding role in the development of policies in a state.

One tool by which MNC' enter into a country as well as create wealth in a country is through the route of Foreign Direct Investment. The Organization for Economic Cooperation and Development (OECD) has defined Foreign Direct Investment as "investment (that) reflects the objective of obtaining a lasting interest by a resident entity in one economy ("direct investor") in an entity resident in an economy other than that of the investor ("direct investment enterprise"). The lasting interest implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence on the management of the enterprise. Direct investment involves both the initial transaction between the two entities and all

subsequent capital transactions between them and among affiliated enterprises, both incorporated and unincorporated”¹

Based on this definition MNC’s are considered as entities who enter into an economy of a country through the route of FDI and then go on to invest in capital projects and physical infrastructure necessary for supporting their business operations. Thus, FDI serves as a very important tool that enables us to understand the effect of multinational corporations on the host country in general and the economic policies of the host country in particular. Scholars such as Blomstrom, Kokko and Zejan (2000) have suggested that the effects of FDI on the host economy are determined by the intricate interplay of firm and host country strategies. Numerous other scholars such as Lall (1978), Mansfield and Romeo (1980), Borensztein, E., de Gregorio, J. and Lee, J. (1998), Aitken and Harrision (1999), Zhang (1999), Nair-Reichert and Weinhold (2001), Khawar (2003), Moran, Graham and Blomstrom (2005) have also shown that not only is FDI an important tool by which multinational corporations enter into the economy of a host country, but also is extremely important as a tool to help promote economic development within the economies of the countries into which the FDI inflow is taking place. This is primarily because FDI inflow not only helps in capital formation within these countries; but also with the entry of multinational corporations employment generation increases as well as there is an increase in the GDP growth rate due to the creation of new goods and services.

Thus, in this dissertation, I will attempt to evaluate how foreign direct investment has influenced the higher educational polices of developing countries by using the case studies of India and China. The reason for the selection of these two cases is guided by the fact that both the countries have had similar economic growth trajectory. In addition the political history of these

¹ OECD benchmark definition of Foreign Direct Investment. Third Edition. 1996. Reprinted in 1999.

two countries is also comparable; since they became independent political entities within a short time span of each other. As per the proponents of globalization, as well as scholars who study the impact of foreign direct investment on developing countries; FDI should bring about a higher level of economic development resulting in optimum utilization of human capital due to continued expansion of the economy. But an evaluation of the case of China and India shows that this aspect does not hold true. In the case of India, MNC's have significantly influenced the educational policy and have helped formulate policies that enable them to meet their manpower needs. This has not only adversely effected sustainable development but also has affected the development of a comprehensive higher education policy in India, which will meet the long term human capital requirements of the country.

On the other hand, if we evaluate the case of China we observe that in China the impact of FDI on China's educational policy has been equally strong. This finding is significant because it goes on to suggest that forces of globalization, especially multinational corporations do significantly impact the economy of a country irrespective of the culture or the type of system that exists within a state. The analysis conducted by me goes on to suggest that even in the case of China, the growth and development of China's educational policy has been guided by the interests of multinational corporations. The rapid economic development of China, the continued inflow of FDI into China and its impact on China's educational policies have contributed to not only making China's educational system the largest higher educational system in the world followed by the United States and India; but also has resulted in a growth of educated unemployment within the state. The only factor preventing social unrest in the state due to absence of employment opportunities for graduates has been the strong security policies adopted by the Government of China.

Therefore, in this dissertation I plan to evaluate the question of how Multinational Corporations through the medium of Foreign Direct Investment influence the educational policies of a state. The fact that both India and China are global economic powerhouses and have been witnessing sustained levels of FDI inflows from the same set of countries within the same time period makes this question even more intriguing.

1.3 Relevance of the Topic

This topic is highly relevant both from a theoretical as well as from a policy perspective. From a theoretical perspective, this dissertation will help to fill in a major gap within the development literature. The literature on development recognizes that multinational corporations through the mode of foreign direct investment play a very important role in the economic development of a state. The globalization literature also supports this viewpoint and discusses the role of multinational and trans-national corporations in intensifying the process of globalization as well as in encouraging the movement of capital from developed countries to developing countries due to emerging market opportunities. In addition, if we study the literature on impact of foreign direct investment on a country's economic development, we observe that the literature is unanimous in its agreement that FDI has a positive impact on a country's economic development.

Furthermore, the literature on why FDI inflows take place into a country has identified the presence of a qualified human capital as an important variable that helps attract FDI inflow into a country. Although, there does exist some literature which discusses the role of education in developing human capital but this literature is few and far in-between. Thus a comprehensive survey of the literature goes on to show that there is an absence of any literature which discusses the impact of FDI inflow on the educational policy of a developing country and how a new

educational policy that develops in reaction to such an FDI inflow affects sustainable development in that country. Therefore in this dissertation I plan to add to the development literature by bridging the gap that exists between the development literature which discuss the role of FDI in bringing about economic development, and the political economy literature that discusses the role of human capital and education in promoting sustainable development.

The dissertation topic is also extremely relevant from a policy perspective. An increase in the understanding of the linkage between foreign direct investment and the formulation of educational policies in developing countries; will play a significant role in ensuring that the developing countries are able to effectively meet the challenge posed by globalization and promote sustainable development by structuring their educational policies so that they are in tune with the broader strategic view that the nation has of itself within the global community.

1.4 Structure of the Dissertation

The dissertation is structured in such a manner so that each piece of the puzzle is evaluated independently and then in the end all the ideas come together to help us further develop our understanding of the impact of FDI on educational policies in developing countries. I have divided the dissertation into seven chapters. In Chapter One, I plan to introduce the topic and identify why the topic is relevant from a theoretical as well as a policy perspective. I will also identify the roadmap to be followed by me in the course of this dissertation. In Chapter Two, I plan to conduct a literature review of the various ideas that exist on the symbiotic relationship between development, globalization, foreign direct investment and human capital and then go on to highlight the research design as well as the theory and the hypothesis. Chapter Two will enable me to show the theoretical linkages between the various ideas as well as help identify the theories that will enable me to propose my own explanation of how FDI influences educational

policy. I will initially conduct a review of the literature on development and globalization and highlight the various ideas which suggest that in the current time period globalization is one of the most important forces that are bringing about economic change and development across the world. I will then discuss the various ideas contained under the realm of the literature on sustainable development and identify how foreign direct investment and human capital plays an important role in promoting economic development. While discussing these ideas, I attempt to highlight the literature which evaluates the role played by foreign direct investment in the development and expansion of human capital. Post this I will discuss the literature on the relationship between educational attainment and development of human capital. This expansive literature review has a two fold objective. First of all, I attempt to show that with an intensification of the process of globalization, FDI has become a very important tool that helps promote economic development in developing countries. Secondly, I also attempt to show that FDI promotes economic development not only by infusing capital into a developing economy but also by setting the stage for the development of human capital through the mode of higher education.

Post the literature review I will identify and review the theories that will help me understand this question, namely the theories on institutional change, human needs theory, the ideas on globalization, the ideas on impact of FDI on the economy of a country, and the theory of strategic marketing from the field of management. Based on these theories I propose to develop a research methodology which will be a combination of both qualitative case study methodology and quantitative time series data analysis. Finally, I will propose my explanation of how FDI influences higher educational policies in developing countries and develop the corresponding hypothesis.

In Chapter Three, I plan to discuss the question of causality. In this chapter I propose to explain the important role being played by FDI in the economic development of China and India, and evaluate the role of FDI inflow in impacting the development of the educational policies in these countries. This chapter will enable me to show that a change in educational policies of both these countries has been a consequence of the impact of foreign direct investment and not any other exogenous factor. In order to resolve the question of causality I will first of all discuss the economic growth of both these countries between the time periods of 1980 and 2008. The start year of 1980 is an excellent reference point as this was the year when the government of both these nations decided to bring about a change in their economic policies due to exogenous global economic shocks. With the help of the data on Gross Domestic Product (GDP) growth rates of these two countries, I will evaluate the process of economic development witnessed by these two countries between the same time periods. Pot this I will evaluate the corresponding data on FDI inflow in these countries to highlight how the GDP growth rate has been a product of FDI inflow and not economic growth due to the internal strengths of the respective economies of India and China. In order to highlight that the FDI inflow was primarily the entry of multinational corporations into India and China, I will evaluate the data on the money value of mergers and acquisitions (M&A's) by multinational corporations, with domestic firms, in both India and China. The data on mergers and acquisitions (M&A) in conjugation with the data on FDI inflow into these countries is a good indicator of an increasing MNC presence in these nations. I will also identify the geographic regions from where these FDI inflows as well as M&A's are taking place to suggest that FDI inflow as well as entry of multinational corporations has primarily been from the developed western nations. This is important because these data point will go on to

show that the economic development of these countries was highly influenced by western modes of production and economic development.

In addition to these variables, I will also evaluate the data on the role played by FDI in capital formation in these two countries. I plan to evaluate the economic data on proportion of FDI as a percent of Gross Fixed Capital Formation (GFCF)². Ernst (2005) has shown that sustained levels of Foreign Direct Investment (FDI) inflows into an under-developed economy not only enables a host country to supplement scarce domestic financial resources but also helps bring about economic development, increases domestic productivity and brings about employment generation. In addition Ramirez (2006) has shown that a high FDI to Gross Fixed Capital Formation (GFCF) ratio suggests that FDI plays a very major role in capital formation within the host country. This argument can be further extended to suggest that the multinational corporations responsible for such high levels of capital formation and FDI inflow into the state, are bound to significantly influence the economic and educational policies of the host states. In order to further strengthen the causality argument I will evaluate other economic data such as FDI as a percentage of GFCF contrasted with the GDP growth rate, GDP growth rate contrasted with FDI as a percent of the GDP, the relationship between FDI inflow in these two countries and FDI as a percentage of Gross Fixed Capital Formation etc. Thus all these data points will help support my central idea that not only has FDI played a very important role in economic development of these two countries, but also that there has been a substantial FDI inflow from the western countries and hence the governments of these two nations should have had pursued

² The term Gross fixed capital formations is defined by OECD as being “measured by the total value of a producer’s acquisitions, less disposals, of fixed assets during the accounting period plus certain additions to the value of non- produced assets (such as subsoil assets or major improvements in the quantity, quality or productivity of land) realised by the productive activity of institutional units”

policies that would not only strengthen their relationship with these multinational corporations but also should have had adopted new policies to retain and attract more multinational corporations.

In chapter Four, I plan to test my hypothesis by evaluating the higher educational policy of India and China. In this chapter I will test my hypothesis by using quantitative methodology. I plan to highlight the correlation between inflow of foreign direct investment into India and China, and consequently its impact on the education policies of these countries. The usage of quantitative methodology is important because it will enable me to evaluate whether there is any correlation between the educational policy of these two countries and foreign direct investment; or not? In order to test this hypothesis I will use the variable ‘increase in the number of educational institutions (EDUINST)’ between 1978 and 2007 as the dependent variable. The choice of the dependent variable has been made because one goal of the educational policy of a state is to increase the number of higher educational institutions to meet the current and future human capital requirements of the economy. I will conduct a regression analysis on this dependent variable with foreign direct investment (FDI) as the independent variable to check whether there has been any effect of FDI on the growth of higher educational institutions in these two countries. I will use gross domestic product (GDP), per capita GDP (PGDP) and GDP growth rates (GDPGR) as control variables to ensure that the increase in the total number of institutions of higher education has not been influenced by the general economic development of the economy of India and China.

In Chapter Five, I plan to further test my hypothesis by qualitatively evaluating the higher educational policy of India and China. In this chapter I will use a qualitative case study methodology, supported by historical statistical data to prove my hypothesis. Initially I will

conduct a case study of India to suggest that the change in educational policy in India has been a result of the impact of multinational corporations and hence the new educational policy that has developed has resulted in economic imbalance in the society severely increasing the levels of educated unemployed and therefore resulting in non-sustainable economic development. Post the analysis of India I will analyze the higher educational policy of China. I will again use qualitative case study methodology supported by historical statistical data to suggest that, the change in the educational policy of China has also been a consequence of the impact of multinational corporations entering into China. I will further go on and identify how this new educational policy has resulted in an increase in the level of educated unemployment and hence has resulted in non-sustainable economic development in China.

In Chapter Six, I propose to explain why foreign direct investments and multinational corporations have had such a significant impact on the educational policies of these two countries. In this chapter I will initially identify the factors that impacted the development of the educational policies and the growth of higher educational institutions in these two countries, and then go on to suggest how it has impacted the social life in these two countries. Finally in Chapter Seven I will conclude my dissertation by summing up all my ideas and identifying the theoretical and policy implications of my dissertation.

1.5 Conclusion

In this chapter I have highlighted my research question and why it is relevant. I have also gone ahead and pointed out the road map that I plan to pursue in order to develop my dissertation as well as explain this extremely interesting as well as important question. The subsequent chapters will enable me to solve this puzzle piece by piece so that we are able to develop a comprehensive

understanding of how foreign direct investment influences the higher educational policies of developing countries.

Chapter 2

LITERATURE REVIEW, RESEARCH DESIGN AND HYPOTHESIS

2.1 Introduction

In order to evaluate the relevance of this topic I will now undertake a comprehensive literature review and approach the ideas from different viewpoints. The objective of this review is to establish the theoretical background on which I plan to base my dissertation. This review will enable me to highlight the importance of globalization and how it promotes economic and social changes across the world. In addition, by discussing various ideas such as importance of foreign direct investment (FDI) in promoting economic development within a state, the literature on the role of FDI in promoting human capital development and the literature on the relationship between human capital and educational policy as well as the role of education in sustainable development; I plan to highlight how the theoretical linkage between economic development, multinational corporations, foreign direct investment and educational policies of a state.

Once I have developed this theoretical relationship between economic development, FDI and educational policies of a state; I plan to evaluate the theories that will enable me to answer my research question as well as develop the corresponding model and hypotheses. Finally, I will explain the research methodology that will be adopted by me to solve this puzzle. The objective of this chapter is to highlight the theoretical ideas on which I plan to base my dissertation and develop the hypothesis and research methodology.

2.2 Literature Review

2.2.1 The Development Literature Revisited

The development of a state is a very complex phenomenon. Within the field of developmental literature there has been a sustained discussion on the role between development and globalization. The starting point for the western developmentalist school of thought would be the post war era. It was a period during which the world had seen numerous changes. Furthermore the colonial powers were withdrawing from their erstwhile colonies and hence a need was felt to bring about an improvement in the status of these under-developed countries. Thus western economists and political scientists tried to develop models that could help promote economic development in these regions. In this regard, the pioneering works in this field were done by Rodan (1943) and Mandelbaum (1947). They were of the view that market forces could not ensure development and hence development in these countries could only be brought about if the government played an important role in bringing about and promoting industrialization within their respective countries. Hoselitz (1952, 1953) furthered this view when he suggested that urbanization was an important pre-cursor to economic growth.

Another view that was advanced was by scholars such as Rostow (1960), Gerschenkron (1962), Apter (1965), McClelland (1975) and Park (1984). They were of the opinion that economic development in societies followed a “linear path” and that all societies went through a similar developmental trajectory. Thus, they were of the view that the third-world was under-developed, primarily because of the fact that it was in an earlier “stage” of development and as it advanced to another stage, the prosperity levels in these countries will improve. In addition these authors were of the opinion that development of a state is an economic as well as a social phenomenon and both of them go hand in hand rather than unilaterally.

Developmentalist theorists such as Nurske (1955), Haberler (1961), and Myint (1964) further suggested the important role played by trade and fiscal policy in promoting development. They suggested that market forces cannot promote development on their own and hence the governments need to take steps to increase trade in order to increase the “extent of the market” to ensure faster development. Another body of literature on development was led by authors such as Hagen (1962) and McClelland (1961). These authors were of the view that in some countries people were more entrepreneurial than others and hence this was another aspect that significantly influenced development.

Thus, we observe that this body of developmental theory laid a lot of emphasis on the fact that the developing states should follow a developmental path similar to the one followed by the Western countries during their earlier phase of development. In the decades between 1960’s and 1970’s these policies were implemented by the developing nations, but the expected returns were not what was envisaged. Instead of the rapid economic growth as envisaged by these developmental thinkers the developing countries only achieved a moderate to low level of economic growth. Another problem faced by the states who adopted his model of economic development was an increase in social dysfunction within their societies. Due to industrialization and rapid urbanization the gap between the rich and poor further widened in the developing world. This not only resulted in creation of social tension in the society, but also resulted in political de-stabilization as well as an increase in the lack of legitimacy of the governments to rule. Furthermore, the patterns of trade were skewed in favor of the developed countries to such an extent that charges were levied against the developed nations of again exploiting these developing states. These charges led to the development of the dependency literature.

During the post-war era, developing countries were offered a choice between two competing paradigms of development, one capitalist and one socialist. However with the collapse of the Soviet Union and communism, developing countries are experiencing a narrowing of the field of development choices to the ones espoused by the cold war victors; marketization of their economies, democratization of their politics and integration with the international capitalist economy (Farmer, 1999).

Thus, in such a scenario, the underdeveloped states were unable to effectively gain from the benefits of capitalism. While a few states prospered the majority of other states either maintained a low level of economic growth or became poor. Thus, political theorists during the 1950's attempted to explain this underdevelopment based on the relationship that these states had with the few developed states. Thus, the dependency school was developed by Raul Prebisch and Myrdal. Raul Prebisch was the head of UN Economic Commission of Latin America and hence he noticed that the import substitution strategy did not have the desired affect of economic growth on Latin America. The general perception that existed was that Latin American States were more susceptible to fluctuations in the external international capitalist system. (Prebisch, 1961) According to Prebisch (1950) there was an imbalance in the nature of trade between the core and the periphery states. The core states were defined as the developed nations that had a major influence on world trade, while the periphery states were identified as states that were dependent on these core states for their trading relationship. In other words the core states were the major trading partners of the periphery states. These core states were primary importing raw material from the periphery states and exporting finished products to the periphery states. He argued that as the price of manufactured goods tends to rise faster than the price of raw material and imbalance existed in the terms of trade. His contention was that states in order to correct this

imbalance and improve upon their balance of payment position, tend to increase their volume of exports over imports. However due to the inelasticity of demand for their product they face an imbalance in the demand supply equation and are unable to improve upon their situation. Thus, an imbalance results and the developed economies utilize this imbalance to further their growth at the expense of these underdeveloped states. Thus, consequently these underdeveloped states end up getting dependent on these developed economies for their trade.

This idea was further expanded by Gunnar Myrdal (1957, 1970). Myrdal was of the opinion that the international capitalist system left unregulated tends to increase the movement of finance capital and skilled labor from developed to lesser developed states. He argues that this process produces uneven development between core and peripheral states and hence as a result of this the inequalities between these states tend to increase. This theory of dependency was further developed by Frank Gunder (1967). He suggested that capitalism produces development in some countries and under-development in others. He further extends this argument to explain that how a contact with the west results in the underdeveloped countries being unable to develop effectively. His view were supported and expanded further by authors such as Dos Santos (1970), Ronald Chilcote, and Joel Edelstein (1974), James Cockroft, Andre Frank and Dale Johnson (1972) and James Petras (1973).

Similar to this view are the works by Johan Galtung (1971). He divided the global economic system into four classes with elites in the most developed states at the top, elites in developing countries after them; the masses in developed countries a level lower than the former and at the bottom are the masses from the developing countries. All these writers had a different perspective of the dependency theory and hence they have been popularly called as the radical dependency theorists. (Bath and Dilmus; 1976).

However, a shift took place in the dependency literature by the writings of by Cordoso (1973), Cordoso and Faletto (1979) and Peter Evans (1976, 1979). Cordoso (1973) with his concept of associated dependent development was the first author who was credited to be belonging to the new dependency literature school. He was of the view that the policy makers in the developing countries try to attract foreign investments by providing low wages and other incentives to investors. The foreign investment may thus provide a robust but an uneven economic growth. He argues that the multinational corporations play a very major role in the development of these states as their long term interests are more effectively met with an increase in prosperity of the dependent country. Thus, in a way they help to promote growth. He further states that although associated development will lead to an economic growth, but this growth would be at the expense of the exploitation of the masses. Thus, this will result in economic growth of the country but not a corresponding increase in the economic prosperity of the country. There will be an inequality in the distribution of wealth. They also pointed out that associated dependent development results in an uneven economic development within states. This view was further supported by Evans(1979), when he argued that decision makers in developing countries have the freedom to make political choices about economic development within the constraints of dependent relationships.

A new direction was given by Theodore H. Moran's work (1974) when he tried to analyze the level of influence that a Multinational Corporation has on a company and furthermore what sort of pressures is the MNC further subjected to. Moran's study reveals that the multinational companies are also subject to a range of limitations, demands, and pressures of their respective systems. Another aspect of the dependency theory has been covered by Packenham (1992), when he talks about Holistic dependency and analytic dependency. Holistic dependency talks about the

“necessarily and simultaneously” of the domination of some classes and nations by others, of the exploitation of classes and nations, and of a host of alleged “concomitants” of these processes of domination and exploitation, such as economic inequalities and so on. On the other hand analytic dependency does not deny that these processes exist or that these alleged concomitants are ever present; sometimes they do exist and are present. It seeks, however, to answer the questions with data rather than definition. An aspect of the dependency literature is inter-dependency propounded by Tony Smith (1981). This concept implies the fact that small but clever countries can also easily manipulate big countries in order to gain concessions. He is of the opinion that big powers are often reluctant to use their power against small ones, which enhances the latter’s bargaining ability. This implies that small countries in alliance can gain concessions from big countries even if they are dependent on them.

Thus, although the dependency theory was very popular among the third world nations and was responsible for a lot of intellectual discourse, however it did not result in any tangible economic or developmental benefits for the third world. Although it did result in growth of mobilization of public opinion in Latin America for the nationalization of the industry, however the problem with this body of literature was that it primarily held the third world responsible for all the evil that plagued the developing nations. Thus, conveniently all the fingers were pointed at the developed countries; however the political leaders as well as institutions within the third world were absolved of all the blame. Furthermore the dependency literature further resulted in a decrease in investment by the multi-national corporations in the third world this was primarily due to the fact that they were hurt by the nationalization of industry movement that had swept across the whole of the third world. Thus, there was a loss of business confidence among

industry leaders in the third world. This resulted in a decrease in foreign direct investment hampering the development of new job opportunities.

2.2.2 Globalization and sustainable development

With the growth of economic development of the world and an increase in economic interdependence between the different regions of the world the ideas of developmentalist scholars became the bedrock on which the globalization literature developed. Thus, the debate on modernization theory in the 1950's and the 1960's prepared the ground for the emergence of the concept of globalization. However before I go ahead and evaluate the globalization literature it is important to understand what is meant by the term globalization. The origin of the word globalization can be traced back to McLuhan's (1964) idea of a global village. However it was Wallerstein's (1974) critique of the modernization theory that helped develop the globalization theory. Building on these ideas Hans Kung (1998) quotes OECD definition to define globalization as a process through which markets and production in different countries become increasingly dependent on one another, because of the dynamic of trade in goods and services and the movement of capital and technology. Furthermore Albrow (1990) defined globalization in terms of relationships between the components of national societies, individual selves, the international system of societies and the mankind. Holm and Sorensen (1995) further defines globalization as the intensification of economic, political, social and cultural relations across borders. This definition is important because it highlights the fact that globalization is simply not an economic phenomenon. Held, McGrew, Goldblatt and Perraton (1999) are of the view that globalization as a process of a set of processes rather than a singular condition. It reflects the emergence of inter-regional networks and systems of interaction and exchange. They argue that globalization affects social, economic and political life of the people. Thus, keeping with all

these viewpoints Messner (2002) describes globalization as a process in the course of which the volume and intensity of trans-boundary transportation, communication and trade relations are rapidly increasing.

The question that comes up at this point is whether globalization is a recent phenomenon or has it been in existence for a long time. Robertson (1992) is of the view that globalization is not a recent phenomenon. He suggests that 'mini globalizations did exist in the past'. He argues that both mini globalization and industrialization gave birth to globalization. Authors such as Lughod (1989) and Gundar Frank (1990) further support this view. They talk about the global inter-connections between the Mediterranean, Asia, China and the Middle East as well as Africa to support their case. Waters (2001) adds to this debate by arguing that globalization was always in existence. The dark ages retarded it while the period of renaissance kick started it. Thus, we observe that although globalization has been existence for a long time, however it is a new phenomenon in its present form.

At this point is important to evaluate the effects that this new form of globalization might have on global society. Initially authors such as Wallerstein (1974, 1979, 1984) considered globalization as the triumph of the capitalist world economy tied together by a global division of labor. The capitalist world system is driven by the logic of capital accumulation. As a result globalization was primarily identified with having economic effects on a state. However authors such as Burton (1972), Keohane and Nye (1973) and Rosenau (1980) have suggested that globalization in addition to economic dimensions also has political dimensions. They noticed that political action was decreasingly confined to the sphere of the nation state and that an elaborate web of trans-national connections was emerging alongside it. Robertson (1995) has defined globalization by distinguishing it from "Global Field". The global field is the singular

social world within which social interaction and social change of various kinds takes place. Globalization is the process by which a single global field has come into being, but it is not the only component part of the global field. Other components include individuals, nations and other communities.

Thus, based on these ideas concerning globalization authors have gone ahead to suggest steps necessary for a viable global order and sustainable development. These authors are of the opinion that globalization is effecting the political and economic development of a state. Bell (1973) argues that the major cause of structural change in the society is the change in the character of knowledge: the exponential growth and branching of science, the rise of new intellectual technology etc. Francois Bourricaud (1970) has pointed out that the growth of non-market welfare economics and the lack of adequate mechanisms to decide the allocation of public goods is politically the problem of post-industrial societies. Holton (1998) suggests that due to globalization there has been an increase in the importance of Trans National Corporations (TNC's). Pieterse (1989) further argues that due to an increase in globalization the nation state is losing its individuality and is becoming subservient to the interests of global forces. Robertson (1992) further advances this view and suggests that in a globalized world there is an internationalization of education. Therefore in order to ensure sustainable development an important pre-requisite is to bring about social parity. This can be done by promoting education. Finally Held, McGrew, Goldblatt and Perraton (1999) are of the view that globalization has influenced social transformations by attacking both at economic level which sustains social networks and cultural level that binds the society together. This view is further supported by Hardt and Negri (2000).

Post the intensification of the process of globalization the concept of sustainable development has become extremely popular. The primary reason being that globalization has resulted in a large number of social, political and economic changes within the developing world. The world commission on Environment and Development (Brundtland Commission, 1987) defined sustainable development as a “development in which present generations find ways to satisfy their needs without compromising the chances of future generations to satisfy their needs”. This viewpoint is further advanced by the United Nations Report of the World Summit on Sustainable Development. One declaration made by the participants was that they “assume a collective responsibility to advance and strengthen the interdependent and mutually reinforcing pillars of sustainable development: economic development, social development and environmental protection; at the local, national, regional and global levels.” The United Nation’s, Educational Scientific and Cultural Organization (UNESCO) has also suggested that sustainable development requires “simultaneous and balanced progress in four dimensions i.e. social, economic, ecological and political; that are totally interdependent.”³ Deming (1999) suggests that the efforts by the Burndtland Commission to establishing and promoting sustainable development were threefold. “First, the WECD effectively established the present generations’ responsibility for safeguarding future generations’ development options and opportunities by protecting the planets environment and natural resources. Second, it placed alleviation of poverty in developing countries as the central axis around which global sustainability would revolve. Third, it recast the pursuit of sustainability in the context of the international economy by recognizing the need to reorder patterns of international trade and flows of capital, and to ensure greater developing world influence in these economic relations.” However, Zicmane (2004) is of the opinion that the

³ Source: http://www.unesco.org/education/tlsf/TLSF/theme_a/mod02/uncom02t02.htm

definitions put forward are “very general and therefore leads to various attempts to narrow it to specific areas. There are several interpretations of sustainable development ranging from “pure ecologist” demanding minimization of human influence on nature to “4D interpretation”, in which sustainable development includes ecological, economic, social and cultural dimensions.” Nayar (1994) also suggests that in the third world or developing countries the concept of a sustainable development can go ahead to imply a process by which there is an attempt to “improve the quality of life through actions focused on educational attainment, access to basic freedom etc.”

In addition to these ideas the Department of Economic and Social Affairs of the United Nations Secretariat published numerous indicators that could be used to evaluate whether a state has witnessed sustainable development or not. The report suggests that “Education is a process by which human beings and societies reach their fullest potential. It is critical for promoting sustainable development and improving the capacity of people to address environment and development issues.” (Department of Economic and Social Affairs of the United Nations Secretariat, pp. 55). They have considered variables such as net enrollment rates in education as well as adult (tertiary) schooling attainment levels as core indicators of sustainable development in developing countries. The report highlights the fact that “These indicators provide measures of the quality of the human capital stock within the adult population of approximately working age. For instance, those who have completed upper secondary education can be expected either to have an adequate set of skills relevant to the labor market or to have demonstrated the ability to acquire such skills.” (Department of Economic and Social Affairs of the United Nations Secretariat, pp. 56)

Thus based on the ideas elucidated above if we apply the “4D interpretation” of sustainable development to my research question it can be argued that, if an educational policy adopted by a state results in the generation of human capital which is utilized optimally by the economy of a country without any adverse economic repercussions such as an increase in unemployment rates; such an educational policy can be considered to be promoting sustainable development. This model of sustainable development based on the impact of educational policy on the process of economic development of a state becomes more significant, if the states in question are witnessing high levels of economic growth.

2.2.3 Foreign Direct Investment, Human Capital and Economic Development

Thus, based on the above literature review we observe that globalization and the concept of development are inter-linked to each other. A central part of both these literatures is the impact of economic factors on the state and the society. In this regard it is important to consider a variable that is not only an important consequence of globalization but also is responsible for bringing about economic development in a globalized world. This variable is the role played by Foreign Direct Investment in bringing about economic development.

The role of FDI in economic development has been critically analyzed by numerous scholars. There exists a large volume of literature which supports the claim that FDI helps to bring about economic development. Lall (1978) is of the opinion that FDI inflows result in technological spillovers. This results in stimulation of the host economy and the subsequent economic development. Mansfield and Romeo (1980) have also discussed the benefit of FDI inflow into a country as they discuss the roll of technology transfer through MNC’s and how this technology transfer is beneficial for the host economy in which FDI inflow is taking place. Borensztein, E., de Gregorio, J. and Lee, J. (1998) suggest that FDI inflows into developing countries are an

important vehicle for the transfer of technology, contributing relatively more to growth than domestic investment. However, the higher productivity of FDI holds only when the host country has a minimum threshold stock of human capital. In addition, FDI has the effect of increasing total investment in the economy more than one for one, which suggests the predominance of complementary effects with domestic firms. Aitken and Harrison (1999) using the case study of Venezuela go on to suggest that governments encourage FDI inflows into a country in order to bring about technological spillovers from foreign to domestic firms. They further point out that although net gains from FDI are small as they negatively impact non MNC owned firms but in case of joint ventures, FDI plays an important part in economic development. This view is supported by Zhang (1999a, 1999b) when he suggests that FDI has had a positive impact on economic growth in countries such as China and India.

Nair-Reichert and Weinhold (2001) examined the relationship between FDI and economic growth in developing countries and found that there is a causal link between FDI and economic growth. Khawar (2003) also suggests that FDI has a positive impact on economic development. He goes on to point out that firms with higher level of foreign ownership have a higher level of productivity as compared to domestic firms. Furthermore he asserts that MNC's are the main conduit through which FDI flows into a country. Williamson (2003) suggests that there exists a 'Washington Consensus' among policy makers within international development organizations that FDI influences development and that, the more FDI a host country can attract the better it is. With specific reference to developing countries the literature further strengthens the view that FDI promotes economic development. Bende-Nabende, Ford, Santoso, and Sen (2003) suggest that long term impact of FDI on economic growths is sustainable and significant as compared to a similar affect on developed countries.

Moran, Graham and Blomstrom (2005) further attempted to highlight the impact of FDI on economic development. They were of the opinion that although there is an agreement between scholars that FDI influences development; however the answer to how FDI actually influences development is extremely elusive. Thus they attempted to answer this question through an edited volume comprised of the viewpoint of numerous scholars. In this volume Blalock and Gertler (2005) suggested that FDI promotes economic growth. Using the case study of Indonesia they highlighted that during times of crisis, FDI helps in faster economic development of host industries. Gorg and Strobl (2005) are also of the view that FDI has a positive impact on a host country. They suggest that influx of FDI in a particular industry stimulates the entry of domestic firms within the same industry. Blonigen and Wang (2005) further strengthened this viewpoint. They are of the opinion that the reason why people have been unable to find relationships between FDI inflow and economic growth was because of incorrect pooling of data from developing to developed country. Their analysis goes on to show that FDI inflows positively affect the economic development of a country. Feinberg and Keane (2005) evaluate the role played by MNC's in economic development. They showed that MNC's in developing countries play an important role in bringing about economic development as they pay higher wages to their employees as well as grow faster than indigenous organizations.

Although there have been some scholars who have argued that the linkage between FDI and economic growth is extremely vague but this viewpoint is not supported by all the scholars. Authors such as Haddad and Harrison (1993) have used the case study of Morocco to suggest that FDI did not increase productivity within firms in Morocco and hence it is not as important for development as is generally presumed to be the case. Hanson (2001) on the other hand is of the opinion that there is weak evidence to support the claim FDI inflows have a positive impact

on a host country. He suggests that although there is evidence to suggest that MNC's are attracted to countries that have a high level of productivity but there is little evidence to support the claim that these MNC's provide any impetus to the host countries. Carkovic and Levine (2005) and Lipsey and Sjöholm (2005) are also of the view that the search for universal relationship between FDI and economic growth is futile.

Thus, even though there have been some naysayer's the majority viewpoint among scholars suggests that FDI has a positive role to play in economic development of a state. However the question that arises at this juncture is the just how does FDI influence development? In this regard numerous approaches have been identified by econometrists such as identifying the sectoral influence of FDI in capital creation, spillover effect of technology brought into a developing country by MNC's etc. An important aspect identified by all these scholars is the role of human capital in not only attracting FDI but also in bringing about sustainable development of a state. Scholars such as Lucas (1990) have identified the important relationship between human capital and FDI. He has shown that a lack of human capital significantly decreases the level of FDI inflow into developing countries Furthermore, Eicher and Kalaitzidakis (1997) are of the view that FDI and human capital are interlinked and that human capital plays a very important role in FDI inflow. Zhang and Markusen (1999) further this idea by showing that the availability of a skilled labor in a host country is a direct requirement of TNC's and affects the volume of FDI inflows. Noorbakhsh, Paloni and Youssef (2001) also evaluated the link between human capital and FDI inflow. They suggested that not only is human capital a statistically significant determinant of FDI inflow but also is one of the most important determinants. They thus suggest that FDI inflows increase in countries that have a high level of human capital. In addition scholars such as Bengoa and Sanchez-Robles (2003) show that although FDI is positively

correlated to development but host countries also require human capital, economic stability and liberalized economies in order to benefit from long term FDI inflows. Li and Liu (2005) go on to show that not only does FDI promote economic growth but also that an interaction between FDI and Human Capital exerts a strong positive effect on economic growth in developing countries. Yi and Chinag (2008) Using threshold regression techniques developed by Caner and Hansen (2004), examine whether the effect of foreign direct investment on economic growth is dependent upon different absorptive capacities. They identify three absorptive capacities, namely, initial GDP, human capital and the volume of trade, as threshold variables in their paper. The empirical analysis done by them shows that FDI alone plays an ambiguous role in contributing to economic growth based on a sample of 62 countries covering the period from 1975 through 2000. Under the threshold regression, they find that initial GDP and human capital are important factors in explaining FDI. FDI is found to have a positive and significant impact on growth when host countries have better levels of initial GDP and human capital.

2.2.4 Education and Human capital

Thus, we observe that Globalization has triggered a massive influx of FDI into developing countries. This influx is in part due to the presence of economic opportunities for MNC's in developing countries, and in part; in response to the presence of human capital. However in order to understand the impact of FDI on educational policies of a state it is important for me to evaluate the literature which discusses the correlation between education and development of human capital. Although, this literature is not comprehensive due to absence of substantial scholarly work in this area, but there have been some scholars who have attempted to draw a linkage between education and human capital. Numerous studies consider high level of education as the most important element in human resource development. (see, OECD, 1998;

UNCTAD, 1994; World Bank, 1999). Meier (1995) has argued that “the most critical manpower requirement tends to be for people with secondary education who can be managers, administrators, professional technicians or sub-professional technical personnel.” However in order to draw a linkage between education and human capital it is important to define the term human capital. Authors such as Sen (1989), Etziopni (1988) and Crocker (1992) have defined Human Capital as a combination of an individual’s capabilities and functions. They have further suggested that these capabilities are induced into an individual through education. Furthermore Lucas (1988) has developed a model, which demonstrates that investment in human capital not only enhances the productivity of the individual but also society. Although he does not specifically refer to a linkage between human capital development and education but he does highlight the fact that education plays an important role in human capital development.

Van den Berg (2001:226) has also suggested that “it is the quality of the labor force, its accumulated experience and human capital, its education system, and so on, that determines an economy’s ability to create new ideas and adapt old ones.” Thus, extending this point, Magnus Blomström and Ari Kokko (2003) are of the opinion that improvements in education and human capital are essential for absorbing and adapting foreign technology, and to generate sustainable economic development in a state. They have also suggested that in the recent years economists have started to emphasize on the importance of knowledge creation as an important determinant for economic growth.

In addition, Lin and Saggi (2005) suggest that host countries can improve FDI inflows by providing skill training and developing vocational institutions within the host country, so that the MNC’s that come in have a ready availability of manpower for their use. Thus their views can be interpreted to suggest that a new educational policy can play an important role in developing

human capital. Keeping with this view Wijeweera, Villano, and Dollery (2007) are of the opinion that FDI inflows exert a positive impact on economic growth only in the presence of a highly skilled labor force. Finally Subbarao (2008) goes on to suggest that an economy can grow only if there is an increase in the productivity of the labor force. He also suggests that there is a positive correlation between FDI and human capital development.

A number of studies in China and India also support the view that education plays an important role in economic development. Tilak (2003) has shown that contribution of education to economic growth increased from 5% of the growth rate in 1950 to 10% in 1960. Similar results have been shown to hold true in the case of China. Chen and Feng (2000) and Demurger (2001) have shown that the stock of higher educated population was important for economic growth in the various regions of China. Wang and Yao (2003) have also suggested that during the period of 1978-1999, investment in human capital contributed by more than 10% to the overall per capita growth.

2.3 Theoretical Framework for the Study

With the growth of globalization the multinational corporations have emerged as a major player in the domestic and foreign policy formulation by states. Authors such as Vernon (1971), Ray (1972), Kaufman (1977), Korten (1995), Richani (2002), Rondinelli (2002) and Cohen and Kupcu (2005) have all found evidence to suggest that multinational corporations have a significant influence on the domestic and foreign policy choices made by a state. As multinational corporations are responsible for creation of wealth and work opportunities in a state they create strong interest groups that not only support them but also aggressively push their agenda. Thus, these multinational corporations end up playing a very deciding role in the development of policies in a state.

One tool by which MNC' enter into a country as well as create wealth in a country is through the route of Foreign Direct Investment. The Organization for Economic Cooperation and Development (OECD) has defined Foreign Direct Investment as “investment (that) reflects the objective of obtaining a lasting interest by a resident entity in one economy (“direct investor”) in an entity resident in an economy other than that of the investor (“direct investment enterprise”). The lasting interest implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence on the management of the enterprise. Direct investment involves both the initial transaction between the two entities and all subsequent capital transactions between them and among affiliated enterprises, both incorporated and unincorporated”⁴ Based on this definition MNC's are considered as entities who enter into an economy of a country through the route of FDI and then go on to establish factories and other businesses by investing money earned by them from their global operations into the economy of the host country into which FDI inflow is taking place. Thus, FDI serves as a very important tool that enables us to understand the effect of multinational corporations on the host country in general and the economic policies of the host country in particular. Blomstrom, Kokko and Zejan (2000) have shown that the effects of FDI on the host economy are determined by the intricate interplay of firm and host country strategies. Numerous other scholars such as Lall (1978), Mansfield and Romeo (1980), Borensztein, E., de Gregorio, J. and Lee, J. (1998), Aitken and Harrision (1999), Zhang (1999), Nair-Reichert and Weinhold (2001), Khawar (2003), Moran, Graham and Blomstrom (2005) have also shown that not only is FDI an important tool by which multinational corporations enter into the economy of a host country but also is extremely important as a factor that helps promote economic development within the economies of host

⁴ OECD benchmark definition of Foreign Direct Investment. Third Edition. 1996. Reprinted in 1999.

countries in which the said FDI inflow is taking place. This is primarily because FDI inflow not only helps in capital formation within the countries but with the entry of these multinational corporations into the economies of the FDI inflow countries there is employment generation as well as an increase in GDP growth rate due to the creation of goods and services within these countries.

Although the above literature goes on to show that FDI inflow and entry of MNC's into the economies of countries are synonymous with each other; but in order to understand how multinational corporations impact the post secondary or higher educational policies of states, it is necessary to first of all identify how institutional change comes about and the role played by these institutions in influencing the policies of a state. This aspect can be effectively explained by using the theories of neo-institutionalism. Furthermore, in order to effectively understand institutional change, I will refer to a sub branch of neo-institutionalism known as historical institutionalism in order to develop my hypotheses.

Before we go ahead and evaluate how institutions change, it is necessary to identify the term institution and how it relates to my question. March and Olsen (1984a), in their seminal article have identified institutions as a collection of norms, rules, understanding and routines. Following up on their work North (1990) further defined institutions as "the rules of the game in the society or more generally...the humanly defined constraints that shape human interaction." Extending this reasoning Pierson (1993, 2004) has made the suggestion that institutions are not only the traditional institutions of the state such as the government, the executive and the judiciary as identified by Friedrich (1937), Wheare (1946), Finer (1949) etc; but also, it would be logical to presume major public policies as important institutions.

Subsequent to the work by March and Olsen (1984a), the field of neo-institutionalism gained momentum. Numerous viewpoints were developed in this school of thought, and historical institutionalism was one of them. The field of historical institutionalism has been particularly characterized by the work done by scholars such as Krasner (1984), Hall (1986), Skocpol (1992), King (1995), Thelen (1999a), Lieberman (2002), etc. One common strand that ran across the writings of these authors was that the theory of historical institutionalism has the potential of explaining change in institutions. (Lieberman, 2002).

The question that comes up at this point is that although it is a given fact that institutions change, but we still need to understand what causal factors cause institutional change. In this regard, the work done by Thelen (1999a, 2000b) has shown that institutional change involves a dynamic of “punctuated equilibria” (Krasner 1989, Collier and Collier 1991). There are brief moments in which opportunities for institutional reform appear, followed by a period of institutional stability. “Junctures” are “critical” because they place institutions on path trajectories which are then very difficult to alter. Critical junctures are attributed to big exogenous shocks, and shocks such as economic changes are major catalysts for bringing about institutional change (Pierson, 2004). Thelen (2003c) further suggests that layering is one of the three processes of institutional change. Layering “involves the practical renegotiation of some elements of a given set of institutions while leaving others in place”. In some cases existing institutions may remain intact, but other institutions are added on, perhaps modifying the functioning of the pre-existing one.

Therefore, we need to identify factors that might be considered environmental in nature that help bring about a change in the institutions, while at the same time are not breaking away from the institutional approach. One factor that fulfils these criteria’s is the economic development of a state and the role that it plays in shaping institutions within a state. Thus, based on the literature

above we can identify how institutions evolve and develop, and what is the role of economic factors through the mode of “exogenous shocks” in bringing about a change within the institutions.

The third body of literature that I evaluate is the concept of “strategic thrust of a nation” given by Kotler, Jatusripitak and Maesincee (1997). They differentiated between what is meant by a “nation’s goal” and a “nation’s strategic thrust”. According to them, “A nation’s goal indicates what a nation wants to achieve; a nation’s strategic thrust answers how to get there”. Thus, as per the concept of strategic thrust, a nation does two types of analyses, “Environmental Analysis” and “Nation’s Goal Formulation”. “The environmental analysis consists of the competitive environment, internal environment and external environment. Assessing the competitive environment helps policy makers to identify the competitive and cooperative patterns it has with other nations. Assessing the internal environment aids policy makers in identifying national strengths and weaknesses, while assessing the external environment enables them to identify both the nation’s opportunities and its threats.” Goal formulation comprises of economic, social and political goals that the nation hopes to achieve. A combination of these two results in the “Nation’s Strategic Thrust”. (Kotler, Jatusripitak and Maesincee 1997)

Finally I look at the concept of needs and wants of human beings. Park (1984) has pointed out that human needs and political development are two sides of the same coin. Sustainable political development cannot take place if the state is not responsive to the needs of the people. An aspect identified by him is that institutions change in response to changing human needs and wants. Thus, this implies that institutional change should mirror the aspirations of the citizens of the state. If there is a disconnect between the institutions that emerge and the human needs of the citizens of the state then such a scenario will lead to social tensions.

2.4 The Variables Defined

Thus, in order to answer my research question I need to identify the variables. The dependent variable in my case is the role played by multinational corporations in influencing the emergence of educational policies in third world countries.

The independent variable used is the influence of multinational corporations on a state. Under this variable I will evaluate the role played by foreign direct investments in increasing government revenues as well as how the entry of multinational corporations results in the growth of skilled manpower employment in a state.

In order to ensure that the change in the educational policy of the state is not due to the natural economic progression of the state I will use three different control variables namely, Gross Domestic Product (GDP), Per Capita GDP and GDP Growth rates of these two countries.

2.5 Theory and Hypothesis

One of the most significant influences of globalization has been the evolution of an increased trade and commerce between the various nations of the world. However globalization has also resulted in the increased susceptibility of underdeveloped states to global economic fluctuations as well as influence of multinational corporations. The question that comes up at this juncture is under what conditions a multinational corporation would become a prominent player in a states political and economic policy decision making? This aspect can be explained by using the concept of exogenous economic shocks and how they bring about institutional change (Thelen 1999a, 2000b; Pierson 2004). According to these scholars when a state faces economic collapse due to its domestic policies or due to global economic crises; then in such a scenario the state will be subjected to an exogenous economic shock. This economic shock forces the policy makers within the state to make drastic changes to the economic policies pursued by the state in

the past. In such a scenario the state undergoes an institutional change. At this juncture, the primary concern of the policy makers within the state is to bring about an improvement in the economic position of the state by adopting and implementing new economic policies.

As the state is facing an unprecedented economic crisis, the state would be unable to utilize its domestic economy to raise capital as well as unilaterally change the structure of its economy.

Thus, at this stage the state will attempt to develop policies which can bring about a fundamental shift within the structure of the economy and help the state to kick start its economy. In such a scenario one avenue that is available to the state is to attract and utilize foreign capital to build up its economy. Under such conditions the state will pursue policies which will attempt to attract new multinational corporations and consequently increase foreign direct investment into the economy of the state. Thus, at this stage the state undertakes a revision of its strategic focus in order to retain the existing multinational corporations as well as to attract new businesses. However the entry of new multinational corporations and the subsequent foreign direct investment into the state is contingent on the presence of incentives within the economy of such a state; which will enable these multinational corporations to maximize their profits as well as meet their short term and long term business goals. One aspect that acts as an important inducement for the entry of these multinational corporations is the presence of trained and developed human capital. In such a scenario, as the state is dependent of these multinational corporations for its continued economic growth and capital development, the multinational corporations end up influencing the policies of the state. Since the competitiveness of these multinational corporations is contingent on the presence of a professional and trained labor force these multinational corporations will exert influence on the higher educational policies of the state.

Thus, under such a scenario the state will attempt to bring about a change in its strategic thrust by developing a new post secondary or higher educational policy. The development of such an educational policy would be primarily geared to meet the manpower requirements of the multinational corporations instead of the long term requirements of the citizens of that state and hence would result in a non-productive utilization of human capital and the growth of a pattern of economic development which would not be sustainable on a long term basis. On the other hand, if a state initiates a new strategic thrust based on its long term national goals then the state will formulate a new educational policy which will result in the creation of a labor force that is utilized effectively within the economy of that state and hence will not only meet the manpower requirements of multinational corporations but also will bring about sustainable economic development of the state. (Figure 1)

Thus, based on these viewpoints I put forward the following hypotheses:

H₁: *If the economy of a state witnesses economic shocks then these shocks will result in an institutional change within the state resulting in the development of new economic policies to attract multinational corporations through the mode of foreign direct investment to promote economic development.*

H₂: *If a state has initiated a new strategic thrust fuelled by foreign direct investments channeled inwards through multinational corporations then the multinational corporations will influence the higher educational policies of such a state in order to develop a human capital that fulfils the manpower requirements of these multinational corporations.*

H₃: *If a state initiates a new strategic thrust based on its long term national goals then the state will formulate a new educational policy which will result in the creation of a labor force that is utilized effectively within the economy of that state and hence will not only meet the manpower requirements of multinational corporations but also will bring about sustainable economic development of the state.*

2.6 Research Design

2.6.1 Methodology

The methodology that I propose to adopt in order to answer my research question is a combination of both quantitative regression analysis as well as qualitative comparative case study methodology.

2.6.2 Identifying and resolving causality

In order to answer the research question it is important for me to solve the question of causality i.e. does the independent actually influence the dependent variable or not? As per the variables identified above the dependent variable is the change in the educational policy of a state and the independent variable is the impact of multinational corporations on the state through the mode of foreign direct investment.

Thus, I plan to first of all establish that the change in the educational policy of both these countries was primarily due to the influence of multinational corporations who entered the economies of these two countries through the mode of foreign direct investment. In order to help solve this question of causality I will first of all go ahead and discuss the levels of Gross Domestic Product (GDP) growth rates in both these countries. I will also discuss the per capita GDP which is an indicator of individual prosperity in both these countries between 1978 and 2008. These two indicators are very important because they will enable us to set a baseline so

that we can evaluate the economic growth trajectory of both these countries prior to the inflow of FDI and post the inflow of FDI.

Once I have established the base line, I will then try to evaluate how FDI has influenced and played a very important role in the economic development of both these countries. In order to evaluate this aspect I will analyze both the FDI inflow as well as the stock of FDI in these countries during the same time periods. I plan to use a time line between 1978 and 2008 for the purpose of this study. Based on the literature evaluated above it can be concluded that FDI inflow and entry of MNC's in an economy of a state are synonymous with each other. Thus, if the data suggests that there has been a high level of FDI inflow into these countries it will suggest that a large number of multinational corporations entered into China and India and invested into the economy of these two states. In order to further strengthen this argument I will evaluate the money value of mergers and acquisitions by MNC's in China and India. These values on mergers and acquisitions (M&A) in conjunction with the data on FDI inflow into China and India will be a good indicator of an increasing MNC presence in both these countries.

Once I have established my argument that there has been a massive influx of multinational corporations into the economy of India and China I will go on to analyze the sources of this FDI inflow. Such an analysis of the breakup of FDI inflow based on regional inflow and investment within a country will enable us to understand whether the FDI inflow was from MNC's based in the different parts of the world, or was this FDI inflow a result of the investment by people of these nations living abroad. This variable is important, particularly in case of China as it will help establish whether FDI inflow was primarily from Western countries or from the "Bamboo Network".

Post this analysis, I will go ahead and use numerous economic indicators to suggest that FDI has played a very important role in not only economic development of these two countries, but also in the capital formation within these countries. This aspect is important because in order for us to understand the influence of MNC's on the social and economic policy of a country we need to understand the sources of capital formation within the states in question. If the state has a high level of domestic vs. foreign capital formation then it would suggest that the economy of a state is strong and the government is able to raise sufficient capital from within the state. In such a scenario the policies of the state will not be affected by the entry of multinational corporations as the state is not dependent on them for its revenues. On the other hand if we notice that foreign capital or FDI plays a very important role in capital formation within the economy of the state then such a state will be extremely dependent on foreign MNC's and hence the policies so formed by these states will be greatly influenced by the needs of these MNC's in order to ensure that they continue to invest within the economy of that particular state. Thus, in order to highlight this aspect I will evaluate the relationship between GDP growth rate in India and China between 1980 and 2007 and the proportion of FDI as a percent of Gross Fixed Capital Formation (GFCF)⁵. Ernst (2005) has shown that sustained levels of Foreign Direct Investment (FDI) inflows into an under-developed economy not only enables a host country to supplement scarce domestic financial resources but also helps bring about economic development, increases domestic productivity and brings about employment generation. In addition Ramirez (2006) has

⁵ The term Gross fixed capital formations is defined by OECD as being “measured by the total value of a producer's acquisitions, less disposals, of fixed assets during the accounting period plus certain additions to the value of non- produced assets (such as subsoil assets or major improvements in the quantity, quality or productivity of land) realised by the productive activity of institutional units”

shown that a high FDI to Gross Fixed Capital Formation (GFCF) ⁶ ratio suggests that FDI plays a very major role in capital formation within the host country. This argument can be further extended to suggest that the multinational corporations responsible for such high levels of capital formation and FDI inflow into the state, are bound to significantly influence the economic and educational policies of the host states.

I also plan to contrast the actual money value of the GDP and the GDP growth rate of these two countries, with FDI as a percent of the GDP. This analysis will again help us understand the role played by FDI in the growth rate of the GDP of these two countries. We will also be able to observe the GDP growth rates in these countries post FDI inflow and prior to FDI inflow.

In order to further strengthen the claim that FDI has influenced the economic policy of China and India in general, and the educational policy in particular I will also evaluate the relationship between FDI inflow into these countries and FDI as a percentage of Gross Fixed Capital Formation. This analysis will help highlight the role played by FDI in the economic development of these two countries as well as whether FDI has been a major component of establishment of new infrastructural projects or not. Finally I will also look at the relationship between the GDP growth rates of these countries and actual money value of FDI inflow into the economies of these two countries.

All the above mentioned analyses will help support my central idea that not only has FDI played a very important role in economic development of China and India, but also that there has been a substantial FDI inflow from multinational corporations headquartered in the western countries

⁶ The term Gross fixed capital formations is defined by OECD as being “measured by the total value of a producer’s acquisitions, less disposals, of fixed assets during the accounting period plus certain additions to the value of non- produced assets (such as subsoil assets or major improvements in the quantity, quality or productivity of land) realised by the productive activity of institutional units”

and hence the government of these two countries should have had pursued policies that would not only strengthen the relationship with these multinational corporations but would also adopt new policies to attract more MNC's.

Thus, if based on the data points mentioned above we observe that the forces of globalization have triggered a massive influx of FDI into these two countries; then, based on the literature on the causes of FDI inflow, it can be argued that such an influx is part in because of the presence of economic opportunities for MNC's in China and India and in part, in response to the presence of human capital. However in order to understand the impact of FDI on educational policies of a state it is important to evaluate the literature which discusses the correlation between education and development of human capital. Although, this literature is not comprehensive due to absence of substantial scholarly work in this area, but there have been some scholars who have attempted to draw a linkage between education and human capital. Numerous studies consider high level of education as the most important element in human resource development. (see, OECD, 1998; UNCTAD, 1994; World Bank, 1999).

Hence, based on the data shown above as well as the literature that exists on the correlation between FDI inflow and development of human capital it is possible to assert that FDI inflow into China and India, from the western countries and the consequent increase in the presence of western multinational corporations in these two countries should impact the development of the educational policy of both China and India. Thus, a new educational policy should develop which would not only meet the existing manpower need of these MNC's but also would be geared towards meeting the future manpower needs of these multinational corporations.

2.6.3 Quantitative Methodology

Once I have resolved the causality question I propose to conduct a regression analysis on the data available to establish whether there is any correlation between FDI and change in educational policies of a state. Based on the literature analyzed in the earlier sections related to the impact of FDI on Human capital formation and economic policies of a state, as well as the analysis of the numerous economic data; I propose that with an increase in FDI inflow into China and India and an increase in the role that multinational corporations play in the economic growth in these countries, both these countries should bring about a change in their educational policies. Such an educational policy will not only meet the labor requirements of these MNC's, but also will be geared towards meeting the future manpower needs of these MNC's in order to ensure continued FDI inflow and entry of MNC's. I plan to use regression analysis to check whether my hypothesis holds true or not.

2.6.3.1 Hypothesis

The objective of this quantitative methodology is to show that Foreign Direct Investment has an impact on the educational policies of a state. Thus the Null Hypothesis and the alternate hypothesis are:

H₀: If the economy of a state has witnessed high levels of economic development fuelled by Foreign Direct Investment then the state will adopt an educational policy under the influence of FDI to meet the manpower requirements of multinational corporations.

H₁: If the economy of a state has witnessed high levels of economic development fuelled by Foreign Direct Investment and yet the state has not adopted an educational policy due to the influence of FDI then the state will be able to ensure sustainable development based on an educational policy that meets the broader strategic goals of the state.

2.6.3.2 Variables Defined

In order to check my hypotheses I will adopt quantitative methodology to show whether there is any correlation in China and India between their educational policy and FDI. In order to test this hypothesis I will use the increase in number of educational institutions (EDUINST) between 1978 and 2007 in both the countries as the dependent variable. The choice of the dependent variables has been made based on the fact that one of the aims of an educational policy of a state is to fulfill the present and future human capital needs of the state; by creating opportunities for students to study on topics which are expected to create current as well as future employment. The educational policy of a state attempts to meet this demand by increasing the number of higher educational institutions offering such an education so that a larger cross-segment of the population of the country is able to study and gain such a functional expertise.

I propose to conduct a regression analysis with the number of higher educational institutions (EDUINST) as the dependent variable and foreign direct investment (FDI) as the independent variable to check whether there has been any effect of FDI on growth of higher educational institutions in China and India. I will use gross domestic product (GDP), per capita GDP (PGDP) and GDP growth rates (GDPGR) as control variables to ensure that the increase in institutions of higher education or an increase in enrolment in these institutions has not been influenced by the general economic development of the Chinese economy.

2.6.4 Qualitative Case Study Methodology

In order to further strengthen my argument as well as to highlight the changes in the educational policies of both these countries under the influence of multinational corporations I plan to use a qualitative case study methodology. In this methodology I plan to evaluate the impact that FDI has had on the emergence of higher educational policies within India and China. In order to strengthen my argument as well as to show this effect I plan to evaluate the case of India and China separately. In these case studies I will first of all review the data which shows that there has been a large inflow of FDI into India and China. Post this I will then analyze the development of the educational policies in both these countries. This analysis will be of educational policies followed by these countries prior to the high FDI inflow, and post the high levels of FDI inflow. I will then go ahead and compare this data with the sectors that have attracted the highest levels of FDI. Such an analysis when contrasted with the data on growth of educational institutions, enrollment ratios, graduation ratios and fields that have graduated the highest levels of students will go on to show the relationship between how the entry of MNC's has influenced the development of educational policies.

These cases studies will be an in-depth analysis of the educational policies followed by both these countries as well as will help strengthen the analysis from the quantitative sections; enabling me to highlight how foreign direct investment has impacted the development of educational policies in developing countries such as India and China.

2.6.4.1 Data Selection and Sources

In this dissertation the qualitative analysis of the cases of India and China would be conducted by taking the following data into consideration:

1. Foreign Direct Investment in India and China between years 1992-2008.

2. Share of country wise FDI Inflows in India and China in US\$ Million between 1991 and 2008.
3. Sector attracting Highest FDI Inflows in US\$ Million between years 2002 and 2008.
4. Growth of professional higher education institutions in India and China between years 1977-2008.
5. Region Wise/State Break up for FDI Inflows received in India in US\$ Million between years 2000-2008.
6. The Engles coefficient for India and China (Urban and Rural Households between 1978 and 2006)
7. Gross Domestic Product Growth Rate and Per Capita GDP of China and India (1978 – 2006)

The data mentioned above has been collected from numerous sources such as the International Monetary Fund, The World Bank, The various agencies of the Government of India and the Government of China, the United Nations Commission on Trade and Development etc. The analysis of these statistical information will enable me to understand how FDI has influenced the educational policy in these two countries and how such an FDI has affected the process of sustainable development.

2.7 Conclusion

The above literature review goes on to suggest that there is a linkage between the development literature and globalization literature. Both these literatures also highlight the role of economic factors in bringing about development in a state and particularly the role of FDI. With an

intensification of globalization, this tool of economic development has become extremely important and has been used by developed countries to not only further expand their economies but also to bring about development in developing countries. Although there does exist some literature which opposes this view point, however this literature is few and far in-between.

Another important aspect that is highlighted by the literature review is the role of human capital in encouraging FDI inflows as well as economic development. The literature suggests that states with high level of human capital are not only able to ensure sustained levels of FDI inflows but also are able to ensure a continued FDI inflow into their economies. Although the literature on the linkage between human capital and education is extremely scarce, but the few authors who have written on this subject matter have highlighted the important role of education in developing human capital within a society as well as the linkage between FDI and education. Thus, the literature review goes on to show the theoretical linkage between FDI inflows into a country, economic development of a country, role of human capital in encouraging FDI into a country as well as the role of education in development of human capital. However the literature also highlights that fact that there is a lack of any study that actually discusses the impact of FDI on educational policy, and consequently what type of impact a new educational policy might have on the social and economic development of an underdeveloped state.

Thus, based on the literature review I have developed my theory and hypothesis as well as the research methodology that will enable me to effectively answer my research questions. In the corresponding chapters I will now discuss the various aspects of the dissertation as outlined by me in Chapter One.

Chapter 3

FDI AND ECONOMIC DEVELOPMENT IN CHINA AND INDIA

3.1 Introduction

The process of economic development of a country is a very complicated and long drawn out process. Although there are numerous viewpoints regarding the best model for initiating economic development in underdeveloped countries, but one aspect that all the various scholars agree on is the role of a strong domestic economy of a state that can help propel the country to a sustained and high level of development. Thus, a strong domestic economy is possible if it is built up on a combination of three ideas namely the desire of the government of that state to initiate and pursue developmental policies without rapid changes, the presence of sufficient capital that can help finance and promote this process of development and the existence of a trained pool of human capital. It is only with a combination of these three aspects can a state promote and pursue a policy that can help improve the economic condition of that state. However, at this point two questions come up. First of all how can the state gain access to the capital necessary to finance the development of the state, especially in the absence of a strong domestic economy and secondly how does the state train and create human capital that can help propel the economic development of the state?

In this regard, one aspect that can help the state to gain access to capital as well as help promote the economic development of the state is the role of Foreign Direct Investment (FDI). Scholars such as Blomstrom, Kokko and Zejan, 2000; Lall, 1978; Mansfield and Romeo, 1980; Borensztein, E., de Gregorio, J. and Lee, J, 1998; Aitken and Harrison, 1999; Zhang, 1999;

Nair-Reichert and Weinhold, 2001; Khawar, 2003 and Moran, Graham and Blomstrom, 2005 etc. unanimously agree that FDI not only plays a very important role in ensuring easy accessibility of capital to the state but also in promoting economic development of the state. This takes place because, as per the definition of the term FDI; FDI implies the physical entry of Multinational Corporation or MNC's into the economy of the state. Thus, when a multinational corporation enters a state it creates physical infrastructure in the form of factories as well as helps kick start the process of employment generation as well as further investment into both the upstream and downstream activities of the value chain⁷ of the sector that multinational corporation is a part of. (Porter, 1985) Thus, in this chapter I will evaluate the process by which multinational corporations have played a major role in the economic development of both India and China through the process of Foreign Direct Investment and consequently, how FDI is a major variable that explains the emergence of a higher educational policy that will help create a trained pool of human capital.

3.2 Role of FDI in development of new Educational Policy: The Variables Defined

In this chapter I propose to explain the important role being played by FDI in China as well as India and how it is impacting the development of the educational policy. This chapter will enable me to show that a change in educational policies of both these countries has been a consequence of the impact of foreign direct investment and not any other exogenous factor. However, at this stage it is important for me to define the term Foreign Direct Investment (FDI) and also highlight

⁷ The concept of a value chain is taken from the idea suggested by Porter in 1985. This concept discusses the process by which a firm develops competitive advantage as well as creates shareholder value through a process of primary and support activities. This concept when applied to our model helps us understand the role that multinational corporation play in promoting economic development by initiating investment into businesses that will help support their manufacturing activities as well as in the creation of new processes by which they can retail their products into the marketplace. This results in creation of employment in both manufacturing and service sectors.

how a multinational corporation plays an important role in the economic development of a state through the process of a growth of ancillary and support agencies, and the growth of various relationships along the value chain. The World Bank (2007) defines Foreign Direct Investment flows (percent of GDP); “as the Gross foreign direct investment is the sum of the absolute values of inflows and outflows of foreign direct investment recorded in the balance of payments financial account. It includes equity capital, reinvestment of earnings, other long-term capital, and short-term capital. Data are in percent of GDP.” (Dreher; 2006) On the other hand UNCTAD (2007) defines Foreign Direct Investment, stocks (in percent of GDP) as “the sum of inward and outward FDI stock as a percentage of GDP.” (Dreher; 2006) These variables are frequently used in econometric analysis by various authors and are an important indicator of the impact of FDI on the economy of a state. (UNCTAD, Kumar (2007), United Nations ESCAP, Ozturk, Ilhan and Kalyoncu, Huseyin (2007), Dreher (2006) etc.

In addition, scholars such as Clerides et al. (1998), Bernard and Jensen (1999), Pavcnik (2002), Bernard and Wagner (2001) are all of the opinion that multinational corporations play a very important role in the economic development of a state by engaging in global trade which helps to give impetus to the local economy of the state. Pietrobelli and Saliola (2008) have suggested that “The concept of value chain describes the full range of activities that are required to bring a product from its conception, through the different phases of production, to its end use and beyond. This includes activities such as design, production, marketing, distribution and support to the final consumer.” (Pietrobelli and Saliola; 2008:4). This implies that a multinational corporations not only creates new employment opportunities for the citizens of a state but also since these multinational corporations require support services in the form of raw materials and other products required for fulfilling their production needs; they go ahead and spawn a host of

supporting and ancillary industries who exist primarily to meet the requirements of these organizations. This results in a growth of the process of industrialization of the economy of the state as well as sets the stage for the process of the development of the service sector. This aspect has been further explained by Sturgeon (2002) and Sturgeon and Lee (2001). They highlight three types of supply relationships between: (i) the ‘commodity supplier’ who supplies standard products through arms length market relationships; (ii) the ‘captive supplier’ that manufactures non-standard products using machinery dedicated to the needs of the firm or multinational corporations; and (iii) the ‘turn-key supplier’ that produces customized products for buyers, and uses flexible machinery to pool capacity for different customers. Thus, based on these ideas it can be suggested that multinational corporations play a very important part in the development of employment opportunities as well as in the overall economic development of a state. Furthermore, by creating wealth both upstream and downstream the value chain; these multinational corporations also help in the process of industrialization of the economy of the state. Since these MNC’s primarily enter the economy of the host country through the process of Foreign Direct Investment, FDI as a variable is extremely relevant and important for us to understand the process by which multinational corporations influence the economy of a developing country.

In order to resolve the question of causality I will first of all discuss the economic growth of both these countries between the time periods of 1980 and 2008. The start year of 1980 is an excellent reference point as this was the time period when governments of both these nations decided to bring about a change in their economic policies due to exogenous global economic shocks. With the help of the data on Gross Domestic Product (GDP) growth rates of these two countries, I will evaluate the process of economic development witnessed by these two countries during the same

time periods. I will then evaluate the corresponding data on FDI inflow in these countries to show how this GDP growth rate has been a product of FDI inflow and not economic growth due to internal mechanisms. In order to highlight that such an FDI inflow was primarily multinational corporations entering into these two countries; I will evaluate the data on the money value of mergers and acquisitions (M&A's) by multinational corporations with domestic firms in both India and China, as well as foreign direct investment as a percentage of the Gross Domestic Product of these two countries.. The data on mergers and acquisitions (M&A) in conjunction with the data on FDI inflow into these countries is a good indicator of an increasing MNC presence in these nations. I will also identify the regions from where these FDI inflows as well as M&A's are taking place to suggest that FDI inflow as well as entry of multinational corporations has primarily been from the developed western nations. This is important because these data point will go on to show that the economic development of these countries was highly influenced by western modes of production and economic development.

I will also evaluate the data on the role played by FDI in capital formation in these two countries. I plan to evaluate the economic data on proportion of FDI as a percent of Gross Fixed Capital Formation (GFCF)⁸. Ernst (2005) has shown that sustained levels of Foreign Direct Investment (FDI) inflows into an under-developed economy not only enables a host country to supplement scarce domestic financial resources but also helps bring about economic development, increases domestic productivity and brings about employment generation. In addition Ramirez (2006) has shown that a high FDI to Gross Fixed Capital Formation (GFCF) ratio suggests that FDI plays a

⁸ The term Gross fixed capital formations is defined by OECD as being “measured by the total value of a producer's acquisitions, less disposals, of fixed assets during the accounting period plus certain additions to the value of non- produced assets (such as subsoil assets or major improvements in the quantity, quality or productivity of land) realised by the productive activity of institutional units”

very major role in capital formation within the host country. This argument can be further extended to suggest that the multinational corporations responsible for such high levels of capital formation and FDI inflow into the state, are bound to significantly influence the economic and educational policies of the host states.

In order to further strengthen the causality argument I will evaluate other economic data such as FDI as a percentage of GFCF contrasted with the GDP growth rate. This analysis will help me show the relationship between GDP growth rates in these countries and capital formation in these two countries as a result of FDI inflow. I will also look at the data points on GDP growth rates and FDI as a percent of the GDP during the same time period. This analysis will also enable me to highlight the relationship between the economic growth of India and China under the influence of foreign direct investment. I also plan to evaluate the data points on the relationship between FDI inflow in these two countries and FDI as a percentage of Gross Fixed Capital Formation and FDI inflow and GDP growth rates. Thus all these data points will help support my central idea that not only has FDI played a very important role in economic development of these two countries, but also that there has been a substantial FDI inflow from the western countries and hence the governments of these two nations should have had pursued policies that would not only strengthen their relationship with these multinational corporations but also should have had adopted new policies to retain and attract more multinational corporations.

3.3 Globalization and its Influence on China and India

In order to evaluate the impact of FDI on educational policies of developing states such as India and China I will first go ahead and highlight the impact of globalization on the economies of these states. Since FDI inflows and the entry of multinational corporations into the boundaries of a state is a product of Globalization it is imperative to evaluate whether these two countries have

been impacted by the forces of globalization or not. Clark (2000) has defined globalization as the “process of creating networks of connections among actors at multi-continental distances, mediated through a variety of flows including people, information and ideas, capital, and goods” (Clark 2000: 86). On the other hand Norris (2000) is of the view that globalization “is a process that erodes national boundaries, integrates national economies, cultures, technologies and governance, and produces complex relations of mutual interdependence (Norris 2000: 155). In addition scholars such as Keohane and Nye (2000) have highlighted “the following three dimensions of globalization:

1. Economic globalization, characterized as long distance flows of goods, capital and services as well as information and perceptions that accompany market exchanges,
2. Political globalization, characterized by a diffusion of government policies and
3. Social globalization, expressed as the spread of ideas, information, images, and people.”

Keohane and Nye (2000:4)

Thus, based on these definitions Dreher (2006) has created a database on the spread of globalization among numerous countries around the world. An analysis of the data available through the KOF globalization index goes a long way in showing how these two countries have been buffeted by the forces of globalization and how they have become extremely integrated into the global economy. In his index Dreher (2006) has created an index on a scale of 1 to 100; wherein a state with a score of 100 is completely globalized and integrated into the global economy while a state with a score of 0 has not at all been influenced by the forces of globalization. Thus, if we evaluate the data in Table 3.1 we observe that on an index of economic globalization both these countries fare quite well. An analysis of China shows that the economic reforms introduced in 1980 played a very important role in the economic globalization of the

country. In 1979 the economic globalization index was 22.67. However by 1987 it reached 31.70 and by the year 2001 was at 52.56. In the year 2006 it had reached a figure of 60.47. Thus, we observe that not only has there been a continued and natural progression of the integration of the Chinese economy with the rest of the world but also that this figure is extremely high and hence shows that China is not immune to the demand and supply equations of the global economy. In addition if we analyze the similar figures for India we observe that prior to the liberalization of the India economy in 1991, the Indian economy was extremely insular as the economic globalization index for the year 1990 was only 17.87. However post the economic reforms of 1991 the Indian economy became extremely integrated into the global economy and by 1998 the economic globalization index had increased to 30.20. In 2006 this index value had increased to 44.84 highlighting that the Indian economy was also extremely globalized.

These values have a greater meaning when we evaluate the overall globalization index given in Figure 3.2. The overall globalization index is comprised of the impact of globalization on the economic, social and cultural aspects on each state. Thus, based on this index we observe that both these countries have matched each other at the rate in which they have integrated into the global society. In 1980 the overall globalization index for China was 21.39 while the figure for India was 25.29. By 1991 these values for both the countries had increased to 36.94 and 30.90 for China and India respectively. Currently in 2006 these values for both the countries was 59.85 and 51.36. These data points are extremely important because they go on to suggest that not only have both these countries integrated into the global economy but also in terms of economic globalization, both these countries have a very high index and hence they have been highly influenced by the demands of the global economy as well as are well integrated into the global economy. This analysis also goes on to show that since these two countries have a high

economic globalization index they also are susceptible to one of the most significant drivers of globalization; i.e. multinational corporations and their impact on a state through the mode of foreign direct investment.

3.4 Foreign Direct Investment and China's Economic Growth

The economic reforms that were introduced in China had a very significant impact on the economic development of China. An evaluation of the data in Table 3.3 shows that between the periods of 1978 and 1995 China witnessed a very high level of GDP growth rate. The GDP growth rate increased from a value of 11.7% in 1978 to 15.2% in 1984. These double digit growth rates were sustained till 1995. Post 1995 also there has not been any substantial decrease in the growth rates with these rates hovering between a low of 7.1% in 1999 to a high of 11.4% in 2007. In addition the per capita GDP which is an indicator of individual prosperity has increased substantially from a low of 381.23 Yuan in 1978 to a figure of 16,084 Yuan in 2006. This has been a phenomenal increase of 4119% in a time span of less than 30 years.

One factor that has played a very important role in the economic development of China has been the influence of FDI inflow into China's economy. An analysis of the data on FDI Inflow as well as stock of FDI in China between 1979 and 2006 (Table 3.4), goes on to show that there has been a substantial inflow of FDI into China. In addition, the stock of FDI in China has also increased substantially. In 1979 FDI inflow in China was only \$ 0.08 Million. However post the reforms initiated by Deng Xiaoping this figure increased to \$ 3,193.68 Million in 1988 and reached a figure of \$ 45,257.04 Million by 1997. Even after the second stage of reforms initiated by Ziang Zemin, the rate of FDI inflow into China not only was sustained but rose to \$40,714.81 Million in 2000. By the end of 2006 the value of FDI inflow into China reached a figure of \$69,468 Million. The volume of FDI inflow into China has not only been staggering but has also been

sustained. These figures become more staggering if we evaluate the stock of FDI in China. In the year 1980 China the stock of FDI in China was only \$1,074 Million. However this figure rose phenomenally to \$13,810.94 Million in 1988, \$153,995 Million in 1997 and had reached a figure of \$292,559 Million by 2006. (see Figures 3.6 and 3.7)

This high level of FDI inflow suggests that a large number of multinational corporations entered into China and invested into the Chinese economy. This viewpoint is supported by an analysis of the data in Table 3.5 which evaluates the money value of mergers and acquisitions by MNC's in China. These values on mergers and acquisitions (M&A) in conjunction with the data on FDI inflow into China are a good indicator of an increasing MNC presence in China. The data on mergers and acquisitions shows that in 1987 MNC's acquired Chinese companies by investing \$37 million to purchase them. However post the changes introduced by Ziang Zemin and Zhu Rongchi in 1998 this figure rose substantially. In 2000 MNC mergers and acquisitions totaled \$38,677 million. Although post the year 2000, the figure of M&A's has not been as high, however the figure has been substantial. In 2005 M&A's totaled \$11,590 Million and by 2007 had reached a figure of \$15,537 Million. Thus, we notice that there has been a sustained increase in MNC presence in China post 1978. Furthermore an analysis of the countries from where FDI inflow has been taking place (Table 3.6) shows that although the "Bamboo network" has been extremely responsible for funneling FDI inflow into China, however the contribution of Western countries has been equally substantial. The data shows that in 2005 FDI inflow into China from the Western countries was \$7,494.85 Million and in 2006 the figure was \$11,456.88 Million. The comparable figures from the Asian countries for the same period were \$4,374.64 Million and \$7,663.24 Million respectively. The net FDI stock of FDI from the west was \$24,490.69 Million while the same figure from Asian countries was \$47,978.05 Million. Thus, even if we discount

the FDI inflow into China as well as the stock of FDI in China from the “Bamboo Network” or the Asian countries we observe that there has been a large investment in China by nations from the developed part of the world and particularly the western world.

In addition if we evaluate Figures 3.1 to 3.6 we observe that FDI has played a very important role in not only the economic development of China, but also in the capital formation within China. Figure 3.1 highlights the relationship between GDP growth rate in China between 1980 and 2007 and the proportion of FDI as a percent of Gross Fixed Capital Formation (GFCF)⁹. Ernst (2005) has shown that sustained levels of Foreign Direct Investment (FDI) inflows into an under-developed economy not only enables a host country to supplement scarce domestic financial resources but also helps bring about economic development, increases domestic productivity and brings about employment generation. In addition Ramirez (2006) has shown that a high FDI to Gross Fixed Capital Formation (GFCF)¹⁰ ratio suggests that FDI plays a very major role in capital formation within the host country. This argument can be further extended to suggest that the multinational corporations responsible for such high levels of capital formation and FDI inflow into the state, are bound to significantly influence the economic and educational policies of the host states.

Thus, in Figure 3.1 we contrast the values of FDI as a percentage of GFCF with the GDP growth rate of China and observe that, post 1980 FDI as a tool of capital formation has grown

⁹ The term Gross fixed capital formations is defined by OECD as being “measured by the total value of a producer’s acquisitions, less disposals, of fixed assets during the accounting period plus certain additions to the value of non- produced assets (such as subsoil assets or major improvements in the quantity, quality or productivity of land) realised by the productive activity of institutional units”

¹⁰ The term Gross fixed capital formations is defined by OECD as being “measured by the total value of a producer’s acquisitions, less disposals, of fixed assets during the accounting period plus certain additions to the value of non- produced assets (such as subsoil assets or major improvements in the quantity, quality or productivity of land) realised by the productive activity of institutional units”

exponentially and plays a very important role within China's economy. Figure 3.2 goes on to further support this viewpoint. In this figure we contrast the GDP growth rate of China with FDI as a percent of the GDP and observe that during the initial reform years' although China had a high GDP growth rate, the percentage of FDI as a proportion of the GDP was low. However, post 1989 this figure spiked and now comprises a very large component of the GDP. Figure 3.3 supports a similar viewpoint as in this figure we contrast FDI as a percent of GDP with the actual money value of the GDP of China.

In order to further strengthen the claim that FDI has influenced the economic policy of China in general and the educational policy in particular; I evaluated the relationship between FDI inflow into China and FDI as a percentage of Gross Fixed Capital Formation in China (Figure 3.4). It was further observed that, till the year 1991 FDI inflow into China was relatively low and so was the ratio of FDI to GFCF. However, post 1991 there has been a phenomenal increase in FDI inflow into China and accordingly there has been a spike in the ratio of FDI to GFCF. These values go on to highlight that not only has FDI played an important role in the economic development of China, but also has been a major component of establishment of new infrastructural projects in China. Figure 3.5 further strengthen this viewpoint by showing that prior to 1990 FDI inflow was not very high even though there was a sustained and high GDP growth rate. However, post 1991 there was a substantial increase in FDI inflow into China. Thus all these figures support the central idea that not only has FDI played a very important role in economic development of China, but also that there has been a substantial FDI inflow from the western countries. Under such circumstances where FDI was responsible for influencing economic development in China, it can be further argued that not only would the Government of China have had pursued policies that would strengthen China's relationship with these

multinational corporations. But also would have had formulated new policies to attract more MNC's.

Thus, we observe that Globalization has triggered a massive influx of FDI into China. This influx is part in because of the presence of economic opportunities for MNC's in China and part in response to the presence of human capital. However in order to understand the impact of FDI on educational policies of a state it is important to evaluate the literature which discusses the correlation between education and development of human capital. Although, this literature is not comprehensive due to absence of substantial scholarly work in this area, but there have been some scholars who have attempted to draw a linkage between education and human capital. Numerous studies consider high level of education as the most important element in human resource development. (see, OECD, 1998; UNCTAD, 1994; World Bank, 1999). Meier (1995) has argued that "the most critical manpower requirement tends to be for people with secondary education who can be managers, administrators, professional technicians or sub-professional technical personnel." However in order to draw a linkage between education and human capital it is important to define the term human capital. Authors such as Sen (1989), Etziopni (1988) and Crocker (1992) have defined Human Capital as a combination of an individual's capabilities and functions. They have further suggested that these capabilities are induced into an individual through education. Furthermore Lucas (1988) has developed a model, which demonstrates that investment in human capital not only enhances the productivity of the individual but also society. Although he does not specifically refer to a linkage between human capital development and education but he does highlight the fact that education plays an important role in human capital development.

Van den Berg (2001:226) has also suggested that “it is the quality of the labor force, its accumulated experience and human capital, its education system, and so on, that determines an economy’s ability to create new ideas and adapt old ones.” Thus, extending this point, Magnus Blomström and Ari Kokko (2003) are of the opinion that improvements in education and human capital are essential for absorbing and adapting foreign technology, and to generate sustainable economic development in a state. They have also suggested that in the recent years economists have started to emphasize on the importance of knowledge creation as an important determinant for economic growth.

In addition, Lin and Saggi (2005) suggest that host countries can improve FDI inflows by providing skill training and developing vocational institutions within the host country, so that the MNC’s that come in have a ready availability of manpower for their use. Thus their views can be interpreted to suggest that a new educational policy can play an important role in developing human capital. Keeping with this view Wijeweera, Villano, and Dollery (2007) are of the opinion that FDI inflows exert a positive impact on economic growth only in the presence of a highly skilled labor force. Finally Subbarao (2008) goes on to suggest that an economy can grow only if there is an increase in the productivity of the labor force. He also suggests that there is a positive correlation between FDI and human capital development.

A number of studies in China and India also support the view that education plays an important role in economic development. Tilak (2005) has shown that contribution of education to economic growth increased from 5% of the growth rate in 1950 to 10% in 1960. Similar results have been shown to hold true in the case of China. Chen and Feng (2000) and Demurger (2001) have shown that the stock of higher educated population was important for economic growth in the various regions of China. Wang and Yao (2002) have also suggested that during the period of

1978-1999, investment in human capital contributed by more than 10% to the overall per capita growth.

Thus, based on the data shown above as well as the literature that exists on the correlation between FDI inflow and development of human capital it is possible to assert that FDI inflow in China from the western countries as well as an increase in the presence of western multinational corporations in China should have had impacted the development of China's educational policy. Thus, a new educational policy should have had been developed which would not only meet the existing manpower need of these MNC's but also would be geared towards meeting the future manpower needs of these multinational corporations.

3.5 The Growing Role of FDI in India's Economic Progress.

In order to evaluate the whether FDI has had any influence on the development of educational policy in India we need to first of all understand the impact of foreign direct investment on the economy of India. The data in table 3.8 is extremely relevant as it enables us to evaluate the amount of FDI inflow as well as the stock of FDI in India between the periods of 1980 and 2006. As per the data the flow of FDI into India in 1980 was only \$79.16 Million. This figure increased to \$252.1 Million by 1989. However post the economic reforms introduced by the government of Prime Minister P.V. Narasimha Rao in 1991 the flow of FDI into India increased substantially. The figure rose up to \$2151 Million in 1995 or an unprecedented jump of 121% over the previous year. These values when observed in terms of a time series graph (Figure 3.12) further help us observe that; as FDI inflow into India increased the GDP growth rates also witnessed a phenomenal increase. During this time period the stock of FDI also witnessed an unprecedented increase. If we compare the stock of FDI in India for the years 1992 and 1995 we observe that in 1995 the stock of FDI increased to \$564.81 Million over 1992's figure of \$1983.81 Million;

an unprecedented increase of 184%. This value of FDI inflow into India has continued to maintain its level and in the Year 2006, the inflow of foreign capital peaked at \$16,881 Million with a FDI stock of \$50,680 Million. These values go on to highlight that not only has there been a massive influx of foreign capital into India but also that this influx has taken place over a very short time span of 15 years. This figure when contrasted with the data on GDP growth rates for India goes on to suggest that with an influx of FDI the GDP of India also witnessed a massive growth rate. In 1980 the GDP growth rate for India was only 3.6% (Table 3.7). However, post the economic reforms of 1991 the GDP increased to 7.6% in 1995, and continued a steady average growth rate of 6% through the following years. The question that comes up at this point is just how much of influence did foreign direct have on the economic development of India?

In order to answer this question we need to evaluate the role of foreign direct investment in capital formation in a country. As discussed earlier a very important economic measurement of this aspect is the ration between FDI and GFCF. Thus, if we evaluate the date on FDI inflow as a percentage of GFCF (Figure 3.13) we observe that FDI has played a very important role in capital formation in India during the past 15 years. An analysis of the data shows that the ratio of FDI to GFCF prior to the economic reforms of 1991 was extremely low. In 1980 FDI as a percentage of GFCF was only 0.2%. Even in 1991 the ratio was only 0.1%. However, within a few years of the economic reforms taking shape and the massive influx of FDI into the Indian economy the figures changed rapidly. In 1994 the ratio was 1.3% and increased to 3.7% by 1997. By 2001 the ratio of FDI to GFCF was 4.9%, and after peaking at 6.6% in 2006 the figure was at 5.8% in 2007. In addition, if we evaluate the data on FDI as a percentage of GDP (Figure 3.14); we observe that till 1993 FDI as a percentage of the GDP was less than 1%. However, post 1994 the figure increased steadily and reached 4.2% in the year 2001, 5.5 % in 2004 and settled at a

high of 6.7% in 2007. Although the ratios of FDI to GFCF and FDI to GDP are not exceptionally high but scholars (Hein, 1989; UNCTAD, 2001; Zhang, 2001; Blin, 2004, Blin and Outtara, 2004) are of the opinion that FDI has growth-enhancing abilities and hence based on their ideas it can be safely assumed that FDI has also played a similar role in the case of India. The data further shows that prior to the economic reforms of 1991, FDI inflow into India had been extremely low and hence FDI had not played a major role in the growth of the Indian economy. However, post the liberalization of the India economy in 1991 and an increase in investment by multinational corporations into India, the role of FDI in economic development of the country increased substantially.

Based on this literature if we analyze Figure 3.8, the causality aspect becomes much clearer. What makes this analysis more intriguing is that the GDP growth rate of India also witnessed a steady upswing during the same periods when FDI played a very important role in capital formation within the Indian economy. If we evaluate the graph, we observe that when the ratio of FDI to GFCF breached the 1% mark in 1994 the GDP growth rate was a phenomenal 6.8%; the highest India had witnessed in the last 25 years. This trend has continued and is aptly reflected by the data. In 2006, as the ratio of FDI to GFCF peaked at 6.6%, the GDP growth rate of the Indian economy also reached a phenomenal figure of 9.7%; the second highest in the world. Thus, the data goes on to suggest that FDI has played a very major role in influencing the GDP growth rates of India, as it has helped pump capital into the Indian economy making credit easily available to businesses as well as Indian citizens. This has enabled the economy to develop into a consumption based economy with a corresponding high GDP growth rate.

This viewpoint is further strengthened if we evaluate the relationship between GDP growth rates in India and FDI as a percent of the GDP (Fig 3.9). If we observe the same years as we did

previously, we notice that in the year 1980 FDI as a percentage of the GDP was only 0.2%. The GDP growth rate during the same period was also low at 3.6%. Even on the eve of the economic reforms in India, i.e. 1991 the corresponding figures were 0.5% and 2.1% respectively. However, post 1991 there was an explosion in terms of GDP growth rates. In 1995 the GDP growth rate reached a high of 7.6%, while at the same time FDI as a percentage of GDP breached the 15% mark and was at 1.1%. By 2006 the GDP growth rate being witnessed by India had reached an all time high of 9.7 % and correspondingly FDI as a percentage of the GDP was also at an all time high of 5.5%. This data when compared with the data in figure 3.10 further shows that in actual money terms the GDP of India was increasing rapidly at the same time as there was an increase in terms of FDI as a percentage of GDP. This relationship holds true not only in percentage terms but also in terms of actual money value as evidenced by the data.

In order to further strengthen the causality argument for India we need to look at the data in figure 3.11 and figure 3.12. The data in figure 3.11 goes on to highlight that as FDI inflow increased the value of FDI as a percentage of the GFCF has also increased. In addition the data in figure 3.12 further strengthens the argument that FDI has had an influence on the economic growth of India. If we evaluate the data of GDP growth rates and actual money value of FDI inflow, we observe that the graph goes on to suggest that there is a correlation between an increase in FDI and an increase in the GDP growth rates of India. Finally, if we observe the values in Table 3.9; we observe that till 1992 there was absolutely negligible mergers and acquisitions (M&A's) activity by multinational firms within the Indian economy. However, post 1994 the situation changed dramatically.

In 1997 India witnessed \$1,597 Million worth of M&A activity. This increased to \$1,888 Million in 2002 and \$7,144 Million by 2005. By the end of 2007 the figure had reached a staggering

value of \$18,830 Million, representing an unheard growth of 1,884% over the year 1998. This data when compared with the values in figure 3.15 goes on to show that not only was a large amount of FDI inflow taking place into the Indian economy, but also that this FDI Inflow was primarily taking place through multinational organizations who were based in the developed parts of the world.

Thus, based on the data as well as the literature on impact of FDI on a state as well as the factors that results in the inflow of FDI into a country and the process of human capital development (See Literature Review in Chapter 2), it can be safely deduced that not only has there been a large amount of FDI inflow into India but also that such an FDI inflow has played a very major role in the development of the Indian economy. Furthermore since this FDI inflow has been taking through the mode of multinational corporations as well as there has been a sustained inflow of new multinational corporations into India as evidenced by the data on FDI inflow as well as M&A's it can be further assumed that multinational corporations have had a major influence on the development of the Indian economy. Thus, based on the data shown above as well as the literature that exists on the correlation between FDI inflow and development of human capital it is possible to assert that FDI inflow in India from the western countries as well as an increase in the presence of western multinational corporations in India should have had impacted the development of India's educational policy. Thus, a new educational policy should have had been developed which would not only meet the existing manpower need of these MNC's but also would be geared towards meeting the future manpower needs of these multinational corporations.

3.6 Conclusion

Thus, in this chapter my objective was to evaluate the role of Foreign Direct Investment in affecting the economic growth of India and China and secondly to identify whether FDI influences educational policy of a state or not. Based on a combination of literature review as well as an analysis of the economic indicators for India and China, we observe that FDI has played a very major role in the economic development of both these countries. Furthermore, since FDI is primarily the mode by which multinational corporations enter into the economy of a state we observe that in the case of India as well as China; there has been a high influx of MNC's post the liberalization introduced by India and China in 1991 and 1980 respectively. Since the literature on the process by which human capital develops is in unanimous agreement that FDI and MNC's play a very major role in the process of development of human capital in a state, it can be further argued that the educational policies of these state should have had been impacted in order to meet the manpower requirements of these multinational corporations. The econometric data on the relationship between capital formation, mergers and acquisitions, GDP growth rate and FDI inflow goes on to further support this view.

Thus, based on the case study analysis above, and a review of the literature; it can be safely assumed that due to the impact of globalization as well as greater integration of the economies of India and China into the global economy, there has been an inflow of FDI into the economies of both these countries resulting in an increase in the presence of multinational corporations. As the continued presence of these multinational corporations as well as the entry of new MNC's is contingent to the existence of a trained pool of human capital it is but natural to assume that these two countries would adopt policies to ensure the development of such a trained human capital. Since the role of education in the development of human capital is extremely important it

can be further stated that the higher educational policies of India and China would have had changed in response to the manpower needs of these MNC's. This aspect is evidenced by the fact that not only has there been a large influx of MNC's into these countries but also that the MNC's have been responsible for the economic development of these two countries in the past 20 years.

Chapter 4

STATISTICAL ANALYSIS OF THE CASES

4.1 Introduction

Based on the analysis of ideas in Chapter 3, it can be safely concluded that FDI inflow and the increase in the presence of MNC's in both India and China; played a major role in the process of economic development in these two countries. Although the above chapter helps comprehensively resolve the causality question, the hypotheses formulated by me have still not been tested. Therefore, in this chapter, I will attempt to test my argument through quantitative methodology. My main objective is to evaluate the role of multinational corporations, through the mode of FDI, on the growth of higher education institutions within these two states.

4.2 Variables Defined

In order to effectively answer my research question I will identify the dependent, independent and control variables as well as the proposed methodology to be used by me in order to answer my research question. I will then go ahead and define the various dependent, independent and control variables and identify how they will interact in my proposed quantitative model and why they are important.

4.2.1 The Dependent Variables

I plan to use quantitative methodology to highlight if there is any correlation in India and China between the changes in their educational policy and FDI inflow or entry of multinational corporations. In order to test this hypothesis I will adopt a model wherein I will use the number of higher educational institutions (EDUINST) as the dependent variable in both the cases of

India and China. The choice of the dependent variable has been made based on the fact that an important objective of the educational policy of a state is to meet the expected as well as long term educational requirements of the state. Thus, based on their projections a state attempts to regulate an increase or a decrease in number of higher educational institutions by formulating an educational policy which either encourages or discourages the same.

4.2.2 The Independent Variable

In order to understand if there has been any effect of foreign direct influence on the educational policies of either of these two states I will conduct a regression analysis of the dependent variable (number of educational institutions) with foreign direct investment (FDI) as the independent variable. The choice of FDI as an independent variable is optimum because based on the literature reviewed in earlier chapters we have observed that entry as well as the influence of multinational corporations on an economy of a state can be best measured by the amount of FDI inflow taking place into the economy of that particular nation or state.

4.2.3 The Control Variables

Since I will be using FDI as an independent variable to help understand the change in educational policy based on an increase in number of educational institutions; it is important to ensure that in the regression model we also consider certain elements that will help control for other aspects that might have had influenced the increase in the number of educational institutions in these two countries. Thus, I plan to use gross domestic product (GDP), per capita GDP (PGDP) and GDP growth rates (GDPGR) as control variables. The variable Gross Domestic Product (GDP) is defined by OECD as “an aggregate measure of production equal to the sum of the gross values added of all resident institutional units engaged in production (plus

any taxes, and minus any subsidies, on products not included in the value of their outputs). The sum of the final uses of goods and services (all uses except intermediate consumption) measured in purchasers' prices, less the value of imports of goods and services, or the sum of primary incomes distributed by resident producer units.”¹¹ The variable Per Capita GDP (PGDP) is defined by business dictionary as the “total national income (GDP) divided by total population. It is not the average income (because it includes children and non-working population) but serves as an indicator of a country's living standards.”¹² The variable GDP growth rate (GDPGR) is defined as the value that signifies the rate at which a country’s income of GDP increases.

These control variables will help to ensure that the model remains balanced and ensures that the increase in institutions of higher education has not been influenced by the general economic development of either the Indian or the Chinese economy. I will use the same control variables in the models that attempt to evaluate if these countries have managed to ensure optimum labor utilization with an increase in number of educational institutions or not.

4.3 Hypothesis

The objective of this quantitative methodology is to show that Foreign Direct Investment has an impact on the educational policies of a state. Thus the main Null Hypothesis and the alternate hypothesis are:

H₀: *If the economy of a state has witnessed high levels of economic development fuelled by Foreign Direct Investment then that state will adopt an educational policy under the influence of FDI to meet the manpower requirements of multinational corporations.*

¹¹ OECD Glossary of statistical terms. <http://stats.oecd.org/glossary/detail.asp?ID=1163>

¹² The website businessdictionary.com. <http://www.businessdictionary.com/definition/per-capita-income.html>

H₁: *If the economy of a state has witnessed high levels of economic development fuelled by Foreign Direct Investment and yet the state has not adopted an educational policy due to the influence of FDI then that state will be able to ensure sustainable development based on an educational policy that meets the broader strategic goals of the state.*

4.4 The Methodology

Authors such as Romer (1990), Levine and Renelt (1992), Li and Liu (2004) etc. have attempted to establish a set of modeling variables that can help us understand the factors that will promote growth and economic development. The “core explanatory variables” identified by these authors include investment (both domestic and foreign), per capita GDP, and GDP growth rates. Thus, based on these ideas I propose to use these variables in my model. The basic equation for this model is

$$y_i = \beta_0 FDI_i + \beta_1 GDP_i + \beta_2 PGDP_i + \beta_3 GDPGR_i + \beta_4 u_i \dots \dots \dots (1)$$

In this equation y_i is the number of higher educational institutions in a country within a given year, $\beta_0 FDI_i$ is the FDI inflow taking place in that particular country during a given year, $\beta_1 GDP_i$ is the Gross Domestic Product of that country during a given year, $\beta_2 PGDP_i$ is the Per Capita GDP of that country during a given year, $\beta_3 GDPGR_i$ is the GDO growth rate of the country during a given year and $\beta_4 u_i$ is the constant term.

In order to effectively answer my research question, it is imperative that the data that is sourced is able to effectively answer the hypothesis, as well as refute the alternate hypothesis. As no data exists regarding the variables chosen by me, I have collected the data regarding each of these variables from the websites of the International Monetary Fund, The World Bank and the Asian Development Bank, and from the official publications of the governments of India and the

governments of China. As the data is a time series data, the numbers of years that I have considered are between the ranges from 1978 to 2006 for China and 1978 to 2007 for India

There are two primary reasons for not considering data prior to the year 1978. First of all, as China was a closed communist country, it did not report any data to any international body prior to the year 1978. In addition prior to 1978 no major FDI inflow took place into China as well as there was no impact of FDI on the educational policy. Furthermore any data that does exist prior to 1978 is highly circumspect and hence cannot be considered as true for our analysis. The end year of 2006 has been chosen for China primarily because the Government of China has not made and data available for the years 2007 and 2008. Similarly the year 1978 has been chosen for India because prior to 1978 India was completely closed as an economy and hence no FDI inflow was taking place. Massive amounts of FDI inflows have taken place only post the liberalization of the Indian economy in 1991. The end year of 2007 has been chosen for India because all the data required for this analysis has not been made available by the Government of India for the year 2008.

Since the dataset that I plan to use is a time-series dataset, I will use the OLS regression model on the dataset collected by me. Thus, in order to answer my research question, I will test my hypothesis in two stages. First of all I will evaluate whether FDI has had any influence on the growth of educational institutions or not. I will then go ahead and evaluate whether FDI has had any influence on unemployment levels as well as whether the growth of educational institutions have had any influence on the unemployment levels. These parameters and regression analysis will enable me to understand the influence of FDI on the growth of educational institutions in these states and subsequently whether these educational institutions have had any influence on the unemployment levels. Once I have tested each of these model for hetroskedasticity, co-

linearity, auto-correlation and high leverage outliers as well as statistically significant outliers; I will represent the results of both these models at the various levels of significance and evaluate whether they support my hypothesis or my alternate hypothesis. At this stage it is important for me to highlight that even by including control variables in the models is not necessary that the variables will highlight the causal link between the dependent and independent variables. The causal relationship between variables must be explained by theory King, Keohane, and Verba (1994). In this study I have highlighted the causal relationships between the variables based on the literature discussed in the preceding chapters as well as in the beginning of this chapter.

4.5 Regression Analysis: Results for India

I will now evaluate the impact of FDI on the growth of educational institutions in India. This analysis will help highlight whether there has been any change in the growth of educational institutions with the high levels of FDI inflow that have taken place into India. I plan to control for the natural progression of the Indian economy by using numerous economic indicators such as Gross Domestic Product, Per Capita GDP and GDP growth rates of the Indian economy.

4.5.1 Descriptive Statistics

Table 4.1 presents descriptive statistics for all variables used in the statistical analyses. The total numbers of observations were 30 as the number of years considered in this study was between 1978 and 2007. The dependent variable for this study is the number of higher educational institutions in India on a year to year basis. Analyses of the descriptive statistics for this variable revealed a mean of 6278.27 and a standard deviation of 5650.38. The data ranges from a minimum of 0 educational institutions for the years 1978 and 1979 to a maximum of 18,326. The primary reason why we have a value of 0 for the years 1978 and 1979 is because no reliable information is available regarding the number of higher educational institutions during these two

years for India. The independent variable is the FDI inflow into India on a year to year basis. Analyses of the descriptive statistics for this variable revealed a mean of 2153.83 and a standard deviation of 3494.20. The data ranges from a minimum of 0 USD Million of FDI inflow for the years 1978 and 1979 to a maximum of 16,881 USD Million. The primary reason why we have a value of 0 for the years 1978 and 1979 is because no reliable information is available regarding the number of FDI inflow during these two years for India.

In my study I have three control variables. The first control variable is the money value of GDP of India in USD Millions on a year to year basis. Analyses of the descriptive statistics for this variable revealed a mean of 1,422,645 USD Millions and a standard deviation of 722,491.7 USD Millions. The data ranges from a minimum of 594,510 USD Million, to a maximum of 3,156,219 USD Million. The second control variable is the Per Capita GDP of India in USD Millions on a year to year basis. Analyses of the descriptive statistics for this variable revealed a mean of 1,674.5 USD and a standard deviation of 791.36 USD. The data ranges from a minimum of 895 USD to a maximum of 3,800 USD. The third control variable is the GDP growth rate of India in percentage terms on a year to year basis. Analyses of the descriptive statistics for this variable revealed a mean of 5.67% and a standard deviation of 2.43%. The data ranges from a minimum of 0% for the years 1978 and 1979 to a maximum of 10%. The primary reason why we have a 0% growth for these two years is because no reliable data exists regarding the GDP growth rate for these two years.

4.5.2 Regression Analysis for India

Based on the variables and methodology identified by me I conducted a regression analysis. The results of the regression analysis can be seen in Table 4.3. One of the advantages of this model is that it has a very high R^2 score of 0.7787. This implies that the independent variables have a very

significant impact on the increase of educational institutions in India, and hence the model has a very high explanatory power. Another advantage of this model is that all the variables are statistically significant at a 99% confidence interval. The only variable that is statistically insignificant at all levels of confidence intervals is the variable GDP growth rates (GDPGR)

Thus, post running a regression on the model, I conducted a whites test on this model. Based on the results obtained, I failed to reject the null hypothesis of homoskedasticity.¹³ This implies that the model did not have any hetroskedasticity. Furthermore, in order to ensure that my observations were correct I also used the Breusch-Pagan and Cook-Weisberg test for hetroskedasticity. This test again re-confirmed my previous findings that the model did not have any hetroskedasticity¹⁴.

In order to further ensure the robustness of the model I conducted a test for co linearity on the model. This test showed that the model did possess a problem of co linearity.¹⁵ The values for the independent variable i.e. FDI inflow into India is 2.06. The values for the first control variable namely GDP growth rate is 1.63, for the second control variable GDP it is 34.50 and for the third control variable Per-capita GDP it is 32.80. I took no steps to improve upon this problem because first of all it is not possible to increase the data size. This is primarily because India did not report any data on all these economic parameter prior to the year 1978. In addition based on the literature all these three control variables are extremely important for my model to ensure that we are able to account for the fact that an the changes in the number of educational

¹³ P value is 0.2095 which is greater than 0.05. Thus we fail to reject the null hypothesis.

¹⁴ P value is 0.2095 which is greater than 0.05. Thus we fail to reject the null hypothesis.

¹⁵ VIF Values for FDI inflow into India is 2.06, for GDP growth rate 1.63, for GDP it is 34.50 and for per-capita GDP it is 32.80.

institutions is not a factor of the economic growth of India. Furthermore the control variable; GDP and Per Capita GDP are statistically significant, and hence it is not possible to drop them from the regression model. As I am using the OLS model in the regression analysis, OLS is the Best Linear Unbiased Estimator and hence in such a situation we can get statistically significant results even with the presence of co linearity.

In order to ensure that there was no autocorrelation in my model I undertook tests to check for this type of error. Thus, I used the Breusch-Godfrey LM test for autocorrelation. The test showed that there was no serial correlation between any of my variables.¹⁶

On analyzing the results of this model, I observed that with an increase in the foreign direct inflow into India the number of educational institutions in India also increases. Although it may be argued that with a unit increase in the foreign direct investment inflow into India the number of higher educational institutions only increased by 0.99; however it cannot be denied that an increase in FDI inflow has had a positive influence on the growth of higher educational institutions in India. Thus, if we contrast these observations with the literature that has been cited as well as the analysis conducted in the chapter three wherein we evaluated whether FDI might be causing a change in the educational policy; we realize that the statistical results do show with a high degree of certainty that an increased FDI inflow into India is resulting in an increase in number of higher educational institutions in India.

Furthermore, on evaluation of the control variables we observe that the increase in higher educational institutions is not a consequence of the natural process of economic development within India. The variable GDP growth rate is statistically insignificant in our observations and

¹⁶ In Breusch-Godfrey test the p value was 0.2794. Thus we failed to reject the null hypothesis.

hence can be discounted. Although the variable Gross Domestic Product is statistically significant, however since it has a very low value of 0.02 it can be assumed that Gross Domestic Product has a statistically significant but negligible influence on the growth of educational institutions. The real surprise is the control variable Per Capita GDP. Based on the literature the common perception would be that as Per Capita GDP increase the economic wealth of a state increase as well as the disposable income within a state. However in our observations we observe that with every unit increase in number of higher educational institutions the Per Capita GDP decreases by 12.42 units. This observation is not only counter intuitive but also plays a major role in supporting my assertions. If the economic growth of India was actually influencing the growth of higher educational institutions in India then the per capita GDP should have had a positive influence on the growth of higher educational institutions. The reason being; because with an increase in the prosperity of the country and with a economic development of the country there should be a corresponding increase in the number of employment opportunities as well as the demand for a trained labor pool. In addition with an increase in the per capita GDP the citizens of the country would have more monetary resources to invest in the education of their children so that they can be trained to meet the demands of the labor force. However in our case we observe that not only has there been an inverse relationship between Per Capita GDP and growth of educational institutions but also the other two control variables have highlighted the fact that the growth of higher educational institutions has not been a consequence of the economic development of the state. In addition our independent variable i.e. FDI inflow has shown itself to be positive and statistically significant.

Thus, based on this analysis I fail to reject the null hypothesis and am of the opinion that an increased FDI inflow into India has been primarily responsible for the growth of higher educational institutions.

4.6 Regression Analysis Results for China

I will now evaluate the impact of FDI on the growth of educational institutions in China. This analysis will help highlight whether there has been any change in the growth of educational institutions with the high levels of FDI inflow that have taken place into China. I plan to control for the natural progression of the Chinese economy by using numerous economic indicators such as Gross Domestic Product, Per Capita GDP and GDP growth rates of the Chinese economy.

4.6.1 Descriptive Statistics

Table 4.2 presents descriptive statistics for all variables used in the statistical analyses. The total numbers of observations were 29 as the number of years considered in this study was between 1978 and 2006. The dependent variable for this study is the number of higher educational institutions in China on a year to year basis. Analyses of the descriptive statistics for this variable revealed a mean of 1085.03 and a standard deviation of 321.20. The data ranges from a minimum of 598 educational institutions to a maximum of 1,867. The independent variable is the FDI inflow into China on a year to year basis. Analyses of the descriptive statistics for this variable revealed a mean of 24,240.07 and a standard deviation of 24,772.36. The data ranges from a minimum of 0 USD Million of FDI inflow for the years 1978 and 1979 to a maximum of 72,406 USD Million. The primary reason why we have a value of 0 for the years 1978 and 1979 is because no reliable information is available regarding the number of FDI inflow during these two years for China.

In my study I have three control variables. The first control variable is the money value of GDP of China in Yuan Millions on a year to year basis. Analyses of the descriptive statistics for this variable revealed a mean of 57,055 Yuan Millions and a standard deviation of 59,925.29 Yuan Millions. The data ranges from a minimum of 3,645 Yuan Million, to a maximum of 210,871 Yuan Million. The second control variable is the Per Capita GDP of China in USD on a year to year basis. Analyses of the descriptive statistics for this variable revealed a mean of 4,568.24 USD and a standard deviation of 4568.24 USD. The data ranges from a minimum of 381 USD to a maximum of 16,084 USD. The third control variable is the GDP growth rate of China in percentage terms on a year to year basis. Analyses of the descriptive statistics for this variable revealed a mean of 9.76% and a standard deviation of 2.82%. The data ranges from a minimum of 4% to a maximum of 15%.

4.6.2 Regression Analysis for China

Based on the variables and methodology identified by me I conducted a regression analysis. The results of the regression analysis can be seen in Table 4.4. In this regression analysis I initially tested the model by OLS regression. The initial R^2 score was of 0.8479. However due to the existence of autocorrelation I conducted a Cochrane Orcutt regression on the data resulting in a new set of value. Based on the new values I am of the opinion that one of the advantages of this model is that it has an R^2 score of 0.5904. This value implies that the independent variables have a significant impact on the increase of educational institutions in China, and hence the model has a high explanatory power. In this model we observe that the independent variable (FDI inflow) along with one of the control variables (GDP growth rate) is statistically insignificant. However, the control variables per-capita GDP is statistically significant at 90% confidence interval and

the other control variable Gross Domestic Product (GDP) is statistically significant at 95% confidence interval.

Post running the initial regression on the model, I conducted a whites test on this model. Based on the results obtained, I failed to reject the null hypothesis of homoskedasticity.¹⁷ This implies that the model did not have any hetroskedasticity. Furthermore, in order to ensure that my observations were correct I also used the Breusch-Pagan and Cook-Weisberg test for hetroskedasticity. This test again re-confirmed my previous findings that the model did not have any hetroskedasticity¹⁸.

In order to further ensure the robustness of the model I conducted a test for co linearity on the model. This test showed that the model did possess a problem of co linearity.¹⁹ The values for the independent variable i.e. FDI inflow into China is 54.21. The values for the first control variable namely GDP growth rate is 1.10, for the second control variable GDP it is 6647.25 and for the third control variable Per-capita GDP it is 7683.39. I took no steps to improve upon this problem because first of all it is not possible to increase the data size. This is primarily because the state of China did not report any data on all these economic parameter prior to the year 1978. In addition, based on the literature; all three control variables are extremely important for my model to ensure that we are able to account for the fact that the changes in the number of educational institutions is not a factor of the economic growth of China. Furthermore the control variable; GDP and Per Capita GDP are statistically significant, and hence it is not possible to drop them from the regression model. As I am using the OLS model in the regression

¹⁷ P value is 0.1970 which is greater than 0.05. Thus we fail to reject the null hypothesis.

¹⁸ P value is 0.7197 which is greater than 0.05. Thus we fail to reject the null hypothesis.

¹⁹ VIF Values for FDI inflow into China is 54.21, for GDP growth rate 1.10, for GDP it is 6647.25 and for per-capita GDP it is 7683.39.

analysis, OLS is the Best Linear Unbiased Estimator and hence in such a situation we can get statistically significant results even with the presence of co-linearity.

In order to ensure that there was no autocorrelation in my model I undertook tests to check for this type of error. Thus, I used the Breusch-Godfrey LM test for autocorrelation. The test showed that there was serial correlation between the variables.²⁰ To solve the problem of autocorrelation I used the Cochrane-Orcutt regression. I tested at both 95% confidence interval level and at 90% confidence interval levels.

On analyzing the results of this model, I observed that the independent variable 'Foreign Direct Investment' is statistically insignificant. Although the regression analysis does not support my hypothesis; but it does not negate it too and consequently I have based my analysis on the combination of ideas from the literature as well as the qualitative case study of China undertaken previously. One factor responsible for the independent variable being statistically insignificant is that although in China the numbers of educational institutions have not increased significantly, but the numbers of students enrolled have increased significantly. (Table 5.6) This feat has been accomplished by increasing the size of the Universities in China to ensure that a larger number of students are able to study in the same University; instead of increasing the number of educational institutions that we have witnessed in the case of India.

Furthermore, on evaluation of the control variables we observe that the increase in higher educational institutions is not a consequence of the natural process of economic development within China. The variable GDP growth rate is statistically insignificant in our observations and

²⁰ In Breusch-Godfrey test the p value was 0.0010. Thus we failed to reject the alternate hypothesis and reject the null hypothesis.

hence can be discounted. Although the variable Gross Domestic Product is statistically significant; however since it has a very low value of 0.07 it can be assumed that Gross Domestic Product has a statistically significant but negligible influence on the growth of educational institutions. The real surprise is the control variable Per Capita GDP. Based on the literature the common perception would be that as Per Capita GDP increases, the economic wealth of a state would increase along with the disposable income within a state. However in our observations we observe that with every unit increase in number of higher educational institutions the Per Capita GDP decreases by 0.94 units. This observation is not only counter intuitive but also plays a major role in supporting my assertions. If the economic growth of China was actually influencing the growth of higher educational institutions in China then the per capita GDP should have had a positive influence on the growth of higher educational institutions. The primary reason being that with an increase in the prosperity of the country, and with the economic development of the country; there should be a corresponding increase in the number of employment opportunities as well as the demand for a trained labor pool. In addition with an increase in the per capita GDP the citizens of the country would have more monetary resources to invest in the education of their children so that they can be trained to meet the demands of the labor force. However in our case we observe that not only has there been an inverse relationship between Per Capita GDP and growth of educational institutions but also the other two control variables have highlighted the fact that the growth of higher educational institutions has not been a consequence of the economic development of the state. The only explanation for a low value in the per-capita GDP can be that the impact of FDI on educational institutions in China has not been as significant or pronounced as in the case of India. Thus, as the number of educational

institutions increases along with a further increase in FDI inflow this negative value might also increase substantially.

Thus, based on this analysis I fail to reject the null hypothesis and am of the opinion that an increased FDI inflow into China has been primarily responsible for the growth of higher educational institutions.

4.7 Conclusion

The observations made above go on to support the primary hypothesis that FDI has had a negative influence on the educational policy of a state. In this quantitative methodology I have identified how a new educational policy influenced by FDI will attempt to increase the number of higher educational institutions in a country in order to meet the growing manpower requirements of multinational corporations. In the case of India we observed that the impact of FDI on the number of educational policy of a state was more pronounced than in the case of China. The differences in the effect of the educational policy can be explained away by the higher GDP growth rates in China as well as the fact that since China is a communist country it has a more centralized planning system and hence the institutional factors in China are able to mitigate some of the influence of FDI.

However, based on the case study as well as the quantitative methodology it cannot be denied that FDI has had a negative influence on the educational policies of both India and China. A result of this has been an over production of human capital that has not been efficiently and effectively absorbed within the economy. This has resulted in an increase in unemployment as well as greater social stress on the economies of these two countries. In the next chapter I will attempt to understand why FDI has negatively impacted the development of educational policies

in these two countries, and what lessons the rest of the developing world can learn from the developmental trajectory adopted by these two countries.

Chapter 5

THE CASE OF INDIA AND CHINA

5.1 Introduction

In Chapter Three we discussed whether Foreign Direct Investment (FDI) might have the potential to influence the educational policy of a state or not. We observed in both the cases of India and China that not only does FDI have the potential to influence the educational policy of a state, but if the economic development of a state is highly dependent on FDI inflows then the economy of that state would be highly susceptible to the demands of multinational corporations. The quantitative analysis in Chapter Four played a major role in highlighting the fact that FDI inflows, and not natural economic development, had played a major role in the growth of higher education institutions in both India and China. However, the quantitative methodology was not able to comprehensively support my hypothesis. Therefore, I will now further discuss the ideas suggested by me in my dissertation model by conducting a qualitative case study of the educational policies of both India and China. My objective will be to evaluate whether FDI has had any influence on the educational policy of either of these states or not? The objective of this chapter is to build upon the ideas developed by me in Chapter Three and Four, and further our understanding of whether foreign direct investment; or in other words the labor demand of multinational corporations have had any role to play in the development of educational policies in India and China.

5.2 Case Study: India

India as a case study provides an excellent example of an under-developed country influenced by western models of development. Post the year India got its freedom in 1947; it attempted to develop a new economic policy. This economic policy was based on a planned mixed economy set-up. India was to be a socialist state in which the government was to accept the responsibility for economic development (Chai and Roy, 2006). This mixed economic system followed by India laid down the foundation for India's economic growth till 1991.

5.2.1 The Economic Shock

It was during the Gulf War of 1991 that India witnessed an economic shock. Due to the conflict in the Middle East, India's import bill for oil rose significantly. Furthermore the value of the rupee continued to depreciate; however the repatriation of proceeds from exports was left overseas. This, followed by the bringing forward of import payments due to the instability of the rupee resulted in an alarming decline in the country's foreign exchange reserves. The resulting decline left the government with only two weeks of reserves for import of goods and services. Thus, this balance of payment crisis of 1991 was a major shock for not only the Indian economic system but also for the psyche of India's economic policy makers.

In addition to the balance of payment crisis the collapse of the Soviet Union and the inherent failures of the socialist ideology so suggested under the Marxist-socialist setup further came as a shock to the socialist ideology that had existed in India. The case of Soviet Union and other former communist countries enabled the Government of India to realize that a continuation of socialist policies that had been adopted in 1947 would lead to an economic collapse within the

country. Thus, as a result of this shock the government of India initiated a massive reform movement within the Indian economy.

5.2.2 Institutional Change and the new Strategic Thrust

In order to understand this institutional change and the subsequent new thrust of the Indian economy, it is necessary to evaluate previous developmental attempts of the Indian economy. Prior to 1991 due to the planned as well as mixed economic nature of the Indian economy, the government of India ensured that the industrial sector was completely under its control. (Bhagwati and Desai, 1970) As a result of this model not only was there inefficiency in the public sector but also there was very little inducement for private entrepreneurship. All these factors in conjugation with other structural problems in the Indian economy eventually culminated into the balance of payment crises of 1991. Hence, post this crisis a shift came about in the “strategic thrust” of India.

Therefore we observe that the economic shock of 1991 had a profound influence on Indian economy. The government took numerous initiatives to ensure that a sustainable development of the country took place. As India follows a centralized pattern of economic growth it formulates five year developmental plans for the country. Thus, the main objective of the 8th five year plan implemented in 1992 was to bring about rapid economic growth of the country by giving impetus to industrial growth, reduction of government interference in the private sectors, and privatization of public sector. The government also attempted to increase foreign direct investment within the country as well as ensure smoother entry for multinational corporations into the Indian market.²¹

²¹ The details for the plan can be found in the report by the planning commission of India on the 8th Five Year plan. Introduction to policy framework.

Thus, based on these government initiatives it can be observed that the Indian government underwent an institutional change in term of its policies. This institutional change resulted in greater impetus on attracting foreign direct investment as well as an increased presence of multinational corporations. This institutional change also resulted in a change in the strategic thrust of the nation. However this change in strategic thrust took place over two different periods.

The first change in the strategic thrust was immediately post the economic crisis of 1991. During this stage the Indian government embarked on a massive plan to increase the presence of multinational corporations as well as to increase the amount of foreign direct investment in India. Therefore we observe that (Figure 5.1) the total value of FDI in India increased from 165 Million US\$ in 1991-1992 to a phenomenal amount of 2,141 Million US\$ in 1996-1997. The value for FDI inflows in 2006-2007 was 9,649 Million US\$.²² Furthermore, the number of multinational corporations in India also increased from a figure of zero in 1991-1992 to an astounding figure of approximately 395 companies by end of 2006.²³ The foreign exchange reserves of the government of India also increased from 5,834 US\$ Million in 1991 to 21,687 US\$ Million in 1996 and are at the current level of 203,881 Million US\$ (Table 5.1). The foreign exchange reserves of the Indian government as a percent of GDP also increased from a paltry figure of 4.8% in 1991 to the present level of 13.6% (Table 5.2). Thus, based on these aspects it can be assumed that the government of India was gaining significantly in terms of enhanced revenues

²² Source: Department of Industrial Policy and Promotion. Ministry of Commerce and Industry. The Government of India.

²³ The total number of companies is reached by counting the number of companies mentioned in the website. <http://indiashomepage.com/c.aspx?cid=566>. The list of companies is a good approximate indicator of actual number of MNC's in India. The actual number may be higher than stated.

due to its strategic shift in its economic focus. However, in order to ensure that the inflow of foreign direct investment continued it was imperative that the government not only bring about structural change within the economy but also try to improve the competitiveness of the country by making it an attractive destination for the multinational corporations. Thus, the Indian government embarked on a second stage of a shift in its strategic thrust by developing and pursuing a new educational policy.

5.2.3 The Emergence of a New Educational Policy

The second stage of this new strategic thrust was initiated when the government of India realized that the continued presence and growth of multinational corporations was imperative for the growth of the Indian economy. The government took steps to make India into an attractive investment destination for these multinational corporations. Since India had a competitive advantage in terms of manpower, the government decided to utilize this resource. Thus, the government went ahead and initiated a series of educational reforms in order to meet the manpower requirements of these multinational corporations. As the maximum amount of FDI inflows in India was from the western countries (Figure 3.15) the Indian government attempted to formulate an educational policy that would reflect the economic needs of the developed countries. Furthermore if we evaluate the sectoral break-up of FDI investment (Table 5.3) we observe that the majority of investment was being undertaken in the arena of electronics, transportation industry, services sector and telecommunications. This implies that the investment as well as entry by multinational corporations was primarily in high technology and high technical as well as managerial skills level industry.

Thus, the Government of India aimed to not only further encourage investment by these multinational corporations into the sector to which they belonged to, but also to encourage

further investment by other foreign companies into these sectors. However such a policy would have had been fruitful only when the government took steps that enabled these multinational corporations and their Indian subsidiaries to meet their business plans and have a high return on investment from their operations. At this point the biggest impediment faced by these multinational corporations to their growth, was the absence of trained manpower. Thus, under pressure from these multinational corporations to provide them with trained technical and managerial manpower, the government of India initiated a change in the post secondary or higher educational policy.

5.2.4 National Policy on Education (1986)

However in order to understand the shift in the present educational policy we need to evaluate the educational policies that existed prior to 1991. The first national policy of education was formed in the year 1968. The aim of the policy as envisaged initially was to *'promote national progress, a sense of common citizenship and culture, and to strengthen national integration. It laid stress on the need for a radical reconstruction of the education system, to improve its quality at all stages, and gave much greater attention to science and technology, the cultivation of moral values and a closer relation between education and the life of the people.'*²⁴ The primary aim of this education policy was to introduce a standard education policy as well as to increase the literacy level across the country. In order to meet the emerging requirements of the country a large number of engineering, medical and management colleges were opened up and administered by the government. The primary aim was to impart education to all segments of the society without bringing undue financial burden onto the students or their families. Thus these universities and colleges were funded directly by the government and a basic tuition fee was

²⁴ National Policy on Education. 1986. The Department of Education. The Government of India.

charged from the students. This aspect was explicitly stated in the National Policy on education *‘To promote equality, it will be necessary to provide for equal opportunity to all not only in access, but also in the conditions for success.....The purpose is to remove prejudices and complexes transmitted through the social environment and the accident of birth. The Nation as a whole will assume the responsibility of providing resource support for implementing programmes of educational transformation, reducing disparities, universalisation of elementary education, adult literacy, scientific and technological research, etc.’*²⁵

5.2.5 National Policy on Education (1992)

However with the liberalization of the Indian economy and the entry of multinational corporations in India, this policy underwent a radical change. Although it is but natural to assume that economic changes will result in change in nature of manpower requirements and hence an educational policy would be reactive to such an industry need, however the policy change in India went far beyond what a natural change in the educational policy would have had resulted in. India for all practical purposes underwent an educational revolution. Higher education became corporatized as well as commercialized and technical, medical and managerial education went beyond the reach of an average Indian.

The first change to the structure of the educational system was done at the governmental level itself. The national policy on education was updated in 1992. Although the new policy did accept the fact that India’s education was being significantly impacted by the forces of globalization and its culture and traditional mode of education was being destroyed, but it further stated that it was essential to go ahead and develop an education plan that would not only meet the requirements of the emerging economy but also would catapult India into the realm of developed nations. The

²⁵ National Policy on Education. 1986. The Department of Education. The Government of India.

report further opened the Pandora's box of commercialization of education by suggesting that as technical and management education is expensive it is necessary for institutions to generate resources to finance their expansion and capacities. However the problem with this suggestion was that it skewed the development of education in India in favor of technical and managerial education.²⁶ Furthermore in response to globalization and needs of the multinational corporations this report suggested that the *'curricula of technical and management programs will be targeted on current as well as projected needs of the industry and other user systems'*²⁷

Thus, as a result of this new educational policy numerous changes took place in the system of higher education in India. The number of general colleges increased from 370 in 1950-51 to 9,427 in 2003-2004. Furthermore the number of professional colleges increased from 208 in 1950-51 to 2,751 in 2003-2004. If we were to break this figure down we observe that the number of universities increased from a figure of 184 in 1990-1991 to 266 in 2000-2001 and 348 in 2005-2006. On the other hand the number of colleges increased phenomenally from 5,748 in 1990-1991 to 11,146 in 2000-2001 and 17,625 in 2005-2006 (Agrawal, 2006). Although such an increase in educational institutions is extremely beneficial for the social growth of any society, but the manner in which the educational institutions increased did not result in an equitable spread of the benefit of education. The growth of higher education in India has been categorized as falling under three categories. The first phase was from 1960-1980, the second phase was from 1980-2000 and the third phase was from the year 2000 onwards.²⁸ It was during the second

²⁶ The emergence of such a trend has been identified by Han Park in his book Human Needs and Political Development. 1984. pp 206-207.

²⁷ Part 5: Promoting Efficiency and Effectiveness at all levels. National Policy on Education 1986. Revised in 1992. The Department of Education. The Government of India. Page 23.

²⁸ Ibid, pp 8.

phase that the concept of higher education supported by the private sector emerged (Table 5.4). This was a period of transition within the Indian economy. Not only was the economy starting to boom, but with the entry of a large number of multinational corporations the requirement for a skilled manpower was increasing. Furthermore since February 2000, foreign direct investment was also being allowed in education in India without any sectoral cap.²⁹ Since the government did not have the resources to bring about a rapid expansion in terms of educational institutions, the private sector took the initiative and stepped in to fill the void. A large number of private medical, engineering and management schools opened up throughout the country.

5.2.6 Higher Education Policy in (1995)

A further analysis of the educational policy of India shows that the trend that started off in 1992 post the liberalization of the Indian economy continued in the coming years. An analysis of the 1994-1995 national policy on education shows that not only did the number of educational institutions increase substantially but also steps were taken to emphasize on skills that would be required to meet the demands of the labor force. Such an emphasis on improvement on the quality of the labor force by the government is not only expected but desirable. However in the case of India it has been observed that such an emphasis has resulted in a skewed development in the labor force as well as the quality of the labor force.

As per the report by “1994-95, the total student enrolment in Universities and Colleges was 50.07 lakhs accounting for more than 2.02 lakhs as in the previous year. The enrolment in the university departments was 8.29 lakhs and that in the affiliated colleges was 41.78 lakhs. Also Enrolment in the Faculty of Arts constituted 40.4 % of the total enrolment. In the faculties of

²⁹ Vide Order No.7(4)/2000-IP dated 11 February, 2000, issued by the Department of Industrial Policy & Promotion

Science and Commerce the percentage was 19.6 and 21.9 respectively. Enrolment at the first degree levels was 44.11 lakhs (88.1 %) at the post-graduate level 4.76 lakhs (9.5%), at the research level 0.55 lakhs (1.1%), and at the diploma and certificate level 0.65 lakhs (1.3%). The total number of teachers increased to 2.86 lakhs during the year. Of these, 0.65 lakhs were in the university departments/ University colleges and the rest in the affiliated colleges. Of the 64847 teachers in the universities, 8300 were Professors, 16990 were Readers, 36963 were lecturers and 2594 were Tutors/ Demonstrators. In the affiliated colleges, the number of senior teachers was 30695, the number of Lecturers was 180418 and that of Tutors/Demonstrators was 9717.”³⁰

In addition to a substantial increase in enrollments and number of higher educational institutions the University Grants Commission (UGC) which is the premier educational policy formulating body in India also emphasized a change in the thrust areas of education. As per the report point 7.1.5 “Some of the major thrust areas pursued during the years were: Autonomous Colleges, Academic Staff Colleges for Orientation of Teachers, eligibility test for recruitment of lecturers, Inter University Centers and Consortiums, Distance Education, Fellowships/Scholarships, COSIST, Adult Education and National Literacy Mission, Spread of Mass Communication and Educational Technology Network, Vocationalization of Education at the first degree level. Environment Education, Curriculum Development/Redesigning of Courses, Computer Education, Education for Scheduled Castes/Scheduled Tribes and for the Minorities and Weaker Sections among the minority communities, Education for the Women and Handicapped, Population Education.”³¹ Although all the other aspects mentioned in this thrust areas were

³⁰ Report on Higher Education (1994-1995). Department of Higher Education. Ministry of Human Resource. The Government of India.

³¹ Ibid. Point 7.1.5.

beneficial for the future development of the Indian economy, however once aspect that laid the foundation for the skewed nature of human capital formation in India was the concept of “Autonomous Colleges”. This term refers to establishment of educational institutions which were affiliated to a particular university within the region where they were established. Point 7.1.10 of the report suggested that the “Commission has been promoting and encouraging the concept of autonomy through its scheme of autonomous colleges which it has decided to continue in the VIII Plan period. At present the total number of colleges which have been granted autonomous status is 108.”³² Although in the initial stages these autonomous colleges were few and far between and promoted higher educational institutions in India, but as the economy grew and pressure on the educational sector to meet the labor requirements of the economy increased these autonomous colleges became synonymous with low quality education and commercialization of education.

5.2.7 Higher Education Policy of (1997)

By the end of 1997 India was witnessing a boom in its economic growth. As per the data in Table 3.7, India’s GDP growth by the end of 1996 had reached a figure of 7.5%. FDI inflow had also increased substantially to 2,525 \$ Millions by the end of 2006 and the stock of FDI stood at 8,165.81 \$ Millions. In such a scenario it was but natural for the educational policy to change in order to meet the growing needs of the Indian economy, particularly the emerging private sector led by multinational corporations. By “the beginning of the year 1996-97, the total student enrolment in universities and colleges was 64.26 lakhs. The enrolment in the University

³² Ibid. Point 7.1.10

Departments was 10.64 lakhs and that in the affiliated Colleges was 53.62 lakhs.”³³ In addition to a growth in the educational sector there was a further emphasis on the vocational aspect of higher education. As per the revised 1992 National Plan for education a “program of vocationalization of education at the first degree level was launched by the UGC from 1994-95. Funds to the tune of Rs.26 Crores were provided by the Ministry of Human Resource Development for implementation of the program.”³⁴

Thus, building upon this program the University Grants Commission (UGC) put further emphasis on subjects such as Tax Procedures and Practices, Business Management, Food Sciences, Industrial Microbiology, Biotechnology and other service related job profiles.³⁵ “During the year 1995-96, another 198 institutions (7 Universities and 191 Colleges) were identified for support for starting vocational subjects involving a total financial commitment of Rs. 1740.50 lakhs (recurring and non-recurring for 1995-96 and Rs.416 lakhs p.a. for the next four years. Another 325 institutions (6 Universities and 319 Colleges) have been covered under the program during 1996-97, thus bringing the total number of institutions up to 1996-97 to 732. During the year, training programmes were also organized for equipping teachers of the respective institutions for teaching the Vocational subjects(s) which were being offered at their parent institutions. The Standing Committee on Vocational Education constituted Regional Monitoring Groups from amongst its members and conducted monitoring exercises at Bhopal, Bombay, Bangalore, Calcutta and Delhi to assess the progress made by the institutions in starting

³³ Report on Higher Education (1996-1997). Department of Higher Education. Ministry of Human Resource. The Government of India. Point 6.1.1

³⁴ Ibid., Point 6.1.9.

³⁵ Ibid., Point 6.1.10

vocational courses.”³⁶ In addition further emphasis was given to the establishment of autonomous colleges. “The Commission has a scheme under which a college declared autonomous by its affiliating university is fully accountable for the content and quality of education it imparts. Such a college is also responsible for setting its own examination papers and for the conduct of examinations. The college evaluates the students for the award of degrees which will be accepted by the parent university. Presently, 113 colleges have been functioning as autonomous colleges spread over the states of Tamil Nadu, Andhra Pradesh, Madhya Pradesh, Orissa, Uttar Pradesh, Gujarat, Maharashtra and Himachal Pradesh.”³⁷ Thus, we observe that by 1996-1997 not only was there a greater stress on developing human capital that was trained to meet the specific requirements of the developing economy but also that there was further de-regulation in the industrial sector.

5.2.8 The Tenth Five Year Plan (2002)

As India has a centrally planned economy the Government of India issues five year plans which is an attempt to anticipate the future requirements of the country as well as to give a direction to the development strategy of the country. The 10th five year plan issues in 2002 by the Central Planning Commission recognized the challenges being faced by the higher educational sector in India due to the forces of globalization. Under point 3.63 of the plan the government of India suggested that “The University and Higher Education Sector also need attention. Although the number of universities has expanded, and many of the universities continue to maintain high standards of education, it is a matter of serious concern that the expansion in quantity has been accompanied by a fall in quality. Modernization of syllabi, examination reforms and greater

³⁶ Ibid., Point 6.1.11

³⁷ Ibid., Point 6.1.12

attention to issues of governance of universities and colleges, all require urgent attention. Part of the problem facing universities is the inadequate provision of budgetary resources from the government. Since budget resources are limited and such resources as are available, need to be allocated to expanding primary education, it is important to recognize that the universities must make greater efforts to supplement resources from the government. University fees are unrealistically low and in many universities have not been raised in decades. This policy is only starving the universities of the minimum resources needed to ensure quality education and is not in the interest of the students. A substantial hike in university fees is essential. Resources raised through adjustment of fees can be supplemented by contributions from industry, constituting funds/trusts like the Bharat Shiksha Kosh, etc. It is also necessary to encourage the establishment of private universities.”³⁸

In addition under point 3.65 the Planning Commission suggested “These considerations apply with even greater force to the technical educational system. Both technical and management education need to be managed strategically in order to provide broad-based, multi-disciplinary education incorporating composite skills and knowledge to meet the challenges posed by globalization. In view of the spurt in demand for education in information technology and other new and emerging technology areas, suitable courses at the degree level need to be given a boost. The challenges posed by faculty shortage and resource limitations have to be tackled through rationalization and networking.”³⁹

³⁸ Approach Paper to the 10th Five Year Plan (2002-2007). Planning Commission. Government of India. New Delhi. 1st September 2001. Page 38. Point 3.63.

³⁹ Ibid. Point 3.65 Page 38-39.

An analysis of the strategies to be adopted by the government of India regarding higher education goes on to suggest that although the government of India was aware of the problems of globalization on the Indian economy as well as regarding the problems associated with the quality of education it took no steps to improve the situation. In fact the educational policy so envisaged not only suggested increasing the number of private educational institutions and universities but also to emphasize on developing a human a human capital that was geared to meet the labor requirements of multinational corporations. This viewpoint can be further strengthened by analyzing point 3.65 under which the Planning commission suggested that more emphasis should be given on the development of technical and managerial education.

These recommendations were introduced as part of the future educational policies developed by the Ministry of Education and resulted in a skewed development of the Indian higher educational sector. An analysis of the annual report on higher education for the year 2004-2005 shows that, “The higher education system of India has seen a 14-fold increase in the number of universities and a 33-fold increase in the number of colleges in comparison to the number at the time of Independence. There are 329 universities and 203 state universities in all at present. The Indian Higher Education System comprises of 18 Central Universities, 90 Deemed Universities, five institutions established under States legislation acts and 13 institutes of national importance established by Central legislation, nearly 16,885 colleges, including around 1,798 women colleges. At the beginning of the academic year 2004, the total number of students enrolled in the formal system of education in universities and colleges was 99.53 lakhs – 12.97 lakhs (13.03 per cent) in university departments and 86.57 lakhs (86.97 per cent) in affiliated colleges.”⁴⁰ Thus,

⁴⁰ Annual Report on Higher Education. (2004-2005) Department of Higher Education. Ministry of Human resource. The Government of India. Page 142.

we observe that not only was there a significant increase in the number of educational institutions but there was also a significant increase in number of student enrollments as well as on the number of private educational institutions. Since the major thrust areas as identified by the Planning Commission was on vocational training in technical and managerial fields the majority of these colleges were not geared to teach these subjects but also to graduate a large number of technically and managerially qualified human capital.

5.2.9 The 11th Five Year Plan and Higher Education Policy Development

Shaped by its previous developmental experience, the Government of India proposed a new five years plan. This plan too emphasized on the important role of higher education in furthering India's future economic development. However by this stage the Indian economy had increased exponentially and India was witnessing the benefits of economic growth. As per Table 3.1 by 2006 India's economic globalization index had peaked at 44.84. In addition the overall globalization index stood at 51.36 (Table 3.2). In addition to these figures India had managed to achieve a GDP growth rate of 9% in 2005 and 9.7% in 2006 (Table 3.7). FDI inflow into India (Table 3.8) had also peaked by reaching a figure of 6.676 \$ Millions in 2005 and an astounding figure of 16,881 \$ Millions in 2006. The stock of FDI stood at a whopping figure of 50,680 \$ Millions. Since the primary source of India's economic development had been FDI inflow and the role played by multinational corporations in creating and expanding the services sector as well as other ancillary industries associated with this sector the new educational policy so envisaged aimed at meeting the future labor requirements of these multinational corporations.

Thus, the 11th Five Year plan proposed by the Planning Commission aims to further develop an educational policy which will enable these multinational corporations meet their future labor requirements. Under point 1.3.d of the approach paper to the 11th Five Year plan, the Planning

Commission has identified the development of human resources as one of the future challenges for the government. The approach paper states that “ The emphasis we had put on quality higher education decades ago, setting up IITs and other premier educational institutions, has paid us rich dividends. However, expansion of such institutes has slackened in the past two decades, and there are clear signs of an emerging shortage of the high quality skills that are needed in the knowledge intensive industries. This could quickly erode our competitive advantage in this area. To ensure a continuous and growing supply of quality manpower we need large investments in public sector institutions of higher learning, combined with fundamental reforms of the curriculum and also service conditions to attract high quality faculty. The scope for expanding capacity through private sector initiatives in higher learning must also be fully exploited, while also ensuring that quality standards are not diluted. Unless this is done on an urgent basis, we will fail to attain global standards.”⁴¹

In addition the plan emphasizes the importance of the service sector for future economic development of the country. As per the plan the “The services sector accounts for 54 per cent of GDP and is currently the fastest-growing sector of the economy, growing at 9 per cent per annum since the mid-1990s. This sector is estimated to have the potential for creating 40 million jobs and generating additional \$ 200 billion annual income by 2020. The sector has the unique opportunity to grow due to its labor cost advantage reflecting one of the lowest salary and wage levels in the world, coupled with a rising share of working age population. The 11th Plan must, therefore, put special focus on this sector so that its potential to create employment and growth is

⁴¹ “Towards Faster and More Inclusive Growth” An Approach to the 11th Five Year Plan. Planning Commission Government of India. June 14, 2006. Point 1.3 (d). Page 6.

fully realized.”⁴² In addition the plan suggests that “While the rapid growth of professional services has been an impressive achievement, industry leaders have been highlighting the emerging skill constraint. Many of the graduates, not only from the humanities but also from the engineering and science streams, need further training to acquire usable skills. India needs to ensure that the number of professionals turned out keeps increasing and, even more importantly, that there is no slackening of standards in education. With India aggressively pursuing the liberalization of trade in services, it is necessary that the educational standards should be such as to enable Indian service providers to hold their own against the best in the world.”⁴³

Thus, we observe that the government of India continues to be highly influenced by the manpower requirements of these multinational corporations while formulating its educational policy. In addition even though there has been a substantial increase in the number of educational institutions within the country the government of India continues to consider an expansion of higher education a top priority instead of ensuring an improvement in the quality of education which will improve the quality of the manpower so produced making them more competitive in the global marketplace instead of the local or regional market place.

5.2.10 Conclusion: Case Study of India

Thus, we observe that globalization has resulted in a situation in which countries are being forced to change their policies. One such policy change that is frequent and necessary for a country to be considered competitive in the global economy is a policy change in education. However such a policy change is fraught with danger. As these states come under strong influence of multinational corporations they attempt to meet the manpower requirements of these

⁴² Ibid. Point 3.3. Page 25

⁴³ Ibid. Point 3.3 (a). Page 26

corporations by changing their educational policy and allowing the growth of private educational entrepreneurship. Although such an act may not create any social imbalance in a developed country, but in an underdeveloped country that is facing a high unemployment as well as poverty level, such acts result in growth of social tensions and conflict within the state.

Based on the case study of India I observe that all the hypotheses formulated by me hold true. The state initially did bring about a change in its higher educational policy, but the new educational policy has not resulted in equitable growth in the country. The divide between the rich and the poor has continued to grow. Although the government has tried to introduce certain laws such as the Private Professional Educational Institutions (Regulation of Admission and Fixation of Fee) Bill, 2005 which prevent private educational institutions from charging exorbitant tuition fees,⁴⁴ as well as legislation introducing reservation for the lower castes in private educational institutions but this has resulted in a backlash from both the private sector as well as other sections of the society. Therefore, the Indian government is caught between the forces of the multinational corporations and the private sector on one side and the demands of its citizens on the other, and is unable to effectively balance between the two. Thus, although globalization has ensured that India is considered as one of the fastest growing economies in the world, but it has also brought out social conflict and dissensions within the society.

5.3 Case Study: China

China as a case study provides an excellent example of how institutional changes affected by economic shocks can force a country, irrespective of ideology, to adopt market oriented economic policies. The case of China is particularly striking since prior to 1978 China was just another developing country having an almost non-existent economy and almost negligible

⁴⁴ Department of Higher Education. Ministry of Human Resource. The Government of India.

reputation as a source of global economic growth. Between the period of 1946 to 1976 China was raked by Civil Wars, the cultural revolution under Mao and inherent instability in the economy. One important aspect that plays a very important role in enabling us to understand the economic development of China and the role of FDI into China is the institutional changes that took place in China; especially in terms of economic policies. This is extremely relevant since China was, and still is, a communist country with a planned economic model and a socialist economy. Therefore in order for us to understand the role of FDI in China and how it has impacted the development of educational policy in China; we need to first of all understand the changes in the economic policy in China and the factors that have helped bring about these changes.

5.3.1 The Economic Shock

In order for us to understand the factors that helped convince China's former premier Deng Xiaoping the importance of economic reforms within the economy, it is necessary to first evaluate the policy history of economic reforms in China prior to 1978. Under the leadership of Chairman Mao the 'Great Leap Forward' and the subsequent 'Cultural Revolution' took place. However, both these political and economic strategies ended up adversely affecting the economy of China and resulted in economic chaos. Agriculture which was the primary employment avenue available to the people initially stagnated and then collapsed; driving more than 25% of the rural population below the poverty line. In the urban areas there was high unemployment level along with collapse of the centralized planning system. Shortages for all commodities were rampant everywhere (Zhang and Yi, 1997:19-56). Fan (1993) is of the view that by the end of the 1970's the Chinese government had realized that the centrally planned system was a failure

and hence there was need to bring about further reforms in order to lift the country out of its current economic troubles.

Furthermore an evaluation of the Engle coefficient⁴⁵ for China (Table 5.5) goes on to show that in 1978 the coefficient was 57.5% for urban households and 67.7% for rural households.⁴⁶ These figures suggest that in China the economy was primarily geared towards subsistence wherein people in the urban areas were using 57.5% of their total consumer spending on food while in the rural areas the figure was 67.7%. In light of these structural failures within the Chinese economy and an almost collapse of the economic system, the government of China had no option but to resort to radical policy changes in order to ensure the continued existence of the Chinese state.

5.3.2 Institutional Change and the new Strategic Thrust

The numerous theories on institutional change are united in their viewpoint that exogenous economic shocks play a very major role in bringing about policy changes within nations. (Thelen (1999a, 2000b, 2003c); Krasner,1989; Collier and Collier, 1991; Pierson, 2004). Thus, as a result of the above mentioned economic shocks received by the Chinese economy ‘the “11th Central Committee of the Communist Party of China adopted the open door policy.” The objective of this policy was to quadruple the Gross Domestic Product (GDP) of China by the year 2000.’ (Das, 2008:5)

At this stage Deng Xiaoping decided to pursue a movement towards a market driven economy based on “gradualism”. “This strategy was politically and economically more feasible as it

⁴⁵ The Engle Coefficient is the proportion of spending on food in the total consumer spending. It is an index used worldwide, which indicates residents’ standard of living. According to the standard set by the Food and Agriculture Organization of the United Nations, living standard of a country or a region can be considered as “rich” when its Engle Coefficient is below 40 percent.

⁴⁶ Source: National Bureau of Statistics of China yearbook for 2007. Table 10-2.

helped to spread transitional costs over a long period.” (Zhang and Yi, 1997:20). In addition the basis of this gradual form of economic development had already been laid out based on the failed reforms adopted by Mao during the 1960’s. Although the Cultural Revolution under Mao had resulted in an economic failure however Naughton (1988:44-63), Liu et al (1995) and Wang, Webber and Ying (2002:124-129) are of the opinion that the concept of “Third Front” which involved the development of military industry within the interior areas played a very important role in helping Deng Xiaoping realized the importance of an economic development strategy based on development of coastal areas.

Thus, learning a lesson from past failures Deng Xiaoping initiated a new economic development policy under China’s Sixth Five Year Plan. “Three macro economic regions were identified in China and each region was asked to develop a strategy based on its competitive advantage. The coastal regions were expected to develop high-technology industries and to participate actively in international markets, while the central and western regions were earmarked for energy, agriculture and mineral development.” (Wang, Webber and Ying, 2002:130) Furthermore special economic zones were set up in Guandong and Fujian provinces to ensure greater access to the booming markets in Hong Kong and Taiwan as well as to ensure easy entry of FDI through the “Bamboo Network” (Wang, Webber and Ying, 2002:133). This phase of economic development in China is also called the drive for capital accumulation (McNally, 2008:24-27). Thus, during this stage attempts were made to increase the savings rates. “Further autonomy was also given to local economic actors and a process of economic and political decentralization took place. In addition to these aspects China’s pricing structure was liberalized and the management of State owned Enterprises (SOE’s) was given greater autonomy. Steps were also taken to encourage FDI

into certain sectors. There was also an increase in the development of private firms during this period.” (McNally, 2008:26-28)

Post the death of Deng Xiaoping in 1997, his vision was carried on by Jiang Zemin and his Prime Minister Zhu Rongji. During the 15th Party Congress held in 1998 “Jiang Zemin redefined state ownership to include joint stock companies and shareholding relationships with private investors as part of the socialist economy. This ideological victory created an excellent context for accelerating SOE reforms. Furthermore he introduced bold programs to privatize public housing, legitimize and increase the private sector, enter the WTO, improve relationships with foreign investors, halve the bureaucracy, accelerate anti-corruption struggle and establish a viable unemployment and insurance retirement scheme.” (Zweig, 2002: 233) Thus, post 1994 the period of economic growth was superior and more rapid. This was a result of “a policy package that combined market-oriented, but prudent microeconomic reforms, with aggressive and growth-oriented macroeconomic policies.” (Geiger, 2005)

Thus, we observe that the numerous policy changes that were initiated in China post economic shocks of pre 1978 years played a very important role in the economic development of China. As a consequence of the various reforms introduced in China, the Gross Domestic Product (GDP) growth rate as well as per capita GDP grew phenomenally. (Table 3.3) One major aspect of economic development in China has been the entry of numerous multinational corporations in China through the FDI route. (Table 3.4) These multinational corporations have played a very important role in not only significantly modernizing and developing the Chinese economy through capital infusion and technology transfer but also have played an important role in transforming China’s economy from a primarily subsistence economy to a modern consumer oriented economy producing goods and services not only for exports but also for internal

consumption. An analysis of the data related to Engle coefficient (Table 5.5) for urban and rural households in China shows that by the year 2000 the Engle coefficient for urban households was 39.4% and for rural households was 49.1%. This ratio further dropped to 35.8% for urban and 43.0% for rural households in China by the year 2006; signifying an increase in standard of living as well as a trend towards an increase in the prosperity level of the average Chinese citizen.

5.3.3 The Origin of the Educational Policy in China

The origin of China's educational policy in general and the higher educational policy in particular took place under Chairman Mao during the days of Great Leap Forward and the Cultural Revolution. Mao attempted to bring about an economic development of China through the establishment of small and medium scale industries in rural China and hence the educational policy formulated by him was geared to primarily deal with the manpower requirements of these industries. (Broaded, 1983) The initial development of education system in China was primarily modeled on the basis of the Soviet education system. However with the failure of the Great Leap forward the Soviet Model was abandoned and an indigenous educational model was developed. This model was a combination of the Confucian and the western education model. The failure of the Cultural Revolution resulted in the scrapping of this model of educational development.⁴⁷

“With the fall of the “Gang of Four” and the ascension to power of the twice rehabilitated Deng Xiaoping, the educational policies reverted to those that had been initiated during the early 1960s. The guiding principle was to bring about educational reforms that would realize the “Four Modernizations,” significant advances in the areas of agriculture, industry, national defense, and

⁴⁷ Source for this information is the report titled “Higher Education in the People's Republic of China” developed by the Finnish National Board of Education.

science and technology, but would keep with the “Four Cardinal Principles”: the socialist road, the people’s democratic dictatorship, the Chinese Communist Party leadership, and Marxist-Leninist-Mao Zedong thought.’⁴⁸

Thus one of the first changes that took place in the field of higher education was the restoration of the concept of a national unified university and college entrance examinations in 1977. (Mullins, 2005) Further reforms had their basis on the two concepts formulated in the 1960’s ‘called “Decision on Unifying Management in the Higher Education System,” and the “Sixty Articles of Higher Education.” The former document was a regularization decree which called for the setting up of a common academic standard, and empowered the Ministry of Education as the final authority and facilitator. The second document was a resolution that the institutions of higher education were to train the experts needed for socialist construction. In 1985 another decree was issued titled the “Decision of the Reform of the Education System.” This has been the guiding document of reform, not only for higher education, but also for all levels of education during the post-Mao years.’⁴⁹ Its main goals were:

1. To bring about the Four Modernizations.
2. To increase state funding for education.
3. To insure that the education system shall supply a sufficient number of highly qualified personnel.
4. To institute a 9-year compulsory education policy.
5. To expand the system of technical and vocational education.
6. To give provisions for reform of higher education:

⁴⁸ Source for this information is the report titled “Higher Education in the People’s Republic of China” developed by the Finnish National Board of Education. Page 5.

⁴⁹ Ibid Page 5.

- a. To change the system of job-assignments to graduates.
 - b. To grant the colleges and universities more decision-making powers.
7. To strengthen educational leadership.
- a. To establish a State Education Commission (SEC). (This had a higher status than the previous Ministry of Education, roughly equivalent to that of the State Economic Commission.
 - b. To establish the president of a college or university, or the principal of a school as the chief executive officer of the unit.

Thus, we observe that the development of educational policy in China was primarily a result of the political agenda of Deng Xiaoping. He “followed a policy of economic rationalism and therefore higher education was regarded as an important corner stone in developing China into a global economic power.” (Brandenburg and Zhu, 2007:17)

5.3.4 China’s Educational System

Thus; as a result of these new educational initiatives which were taken prior to the years of high levels of FDI inflow, the backbone of China’s educational system was laid down. The objective of the higher educational system was to produce manpower to meet the broader strategic goals of the state as well as to ensure that the manpower was highly skilled so as to be able to meet the requirements of the nation’s economic growth. In China “Higher education is provided by institutions of various types including universities (general and technical), specialized institutions (medicine, agriculture, foreign languages etc.), vocational universities (e.g. teacher training) and specialized colleges. Entry to higher education in China is highly competitive. The Bachelor’s degree is granted by universities and specialized institutions. However, the right to grant the Bachelor’s degree has also been given to some vocational universities. Vocational

universities and specialized colleges provide non-university postsecondary studies and their graduates are awarded diplomas. Higher education is also provided by adult higher education institutions of various types. The length of studies may vary from one month to three years. Some institutions have the right to award the Bachelor's degrees upon the completion of four-year studies."⁵⁰

It is interesting to note that in China admission to these higher educational institutions is extremely coveted and is based on a national university entrance examination. Furthermore the curriculum is developed and followed nationally and the number of student intake into a specific program at any institution is based on the current and projected economic requirements of the state as determined through central planning. Furthermore in the past all graduates from these universities were directly employed in the services of the Chinese government. Although this policy has changed in the current period, however government jobs are still extremely coveted especially among students from the rural areas.⁵¹

5.3.5 Educational Policies in China (1995-2008)

As a result of all the changes initiated in the educational and economic sectors by Deng Xiaoping, China was able to bring about a high level of economic development. As FDI inflow as well as GDP growth rates increased the Chinese universities also reacted in order to keep pace with the high growth levels as well as be able to meet the technical and managerial manpower requirements of the Chinese economy in general and the MNC's who had established their base in China, in particular. However as Figure 3.3 shows, the year 1991 was very important as it was during this period that the GDP as well as FDI as a percentage of the GDP grew phenomenally.

⁵⁰ Ibid, Page 6

⁵¹ Ibid, Page 11.

Thus, in order to meet the changing requirements of China's economy the government initiated a set of reforms starting from 1995. At this juncture it is important to note that as the level of FDI inflow into China increased the educational policy started to exhibit a shift in order to develop an educational system that would be able to meet the growing demands of the economy as well as the future expected manpower requirements of the new MNC's who were setting up shop in China.

5.3.6 Education Law of 1995

The Education Law of the People's Republic of China formulated on March 18, 1995 re-emphasized under Articles 3, 4, 5 and 10 that the new educational policy would be a combination of Marxism, Leninism and Maoist thought incorporated with Chinese characteristics to build a strong socialist society. These articles further stressed that the objective of the new educational policy is to bring about the national strategic development of China as envisaged in the various five year plans. An important aspect of the education Law of 1995, and one that can be considered as a reaction to an increasing influence of new businesses and changing manpower requirements of the economy, can be understood based on the ideas contained in Article 5 and Article 11 of the educational policy. Article 5 suggests that "Education must serve the socialist modernization drive and must be combined with production and physical labor in order to train for the socialist cause builders and successors who are developed in an all-around way-morally, intellectually and physically."⁵² In addition according to Article 11 "To meet the needs of developing a socialist market economy and promoting social progress, the State carries forward educational reform, fosters a coordinated development of education at various levels and of

⁵² Article 5 of the Education Law of the People's Republic of China promulgated on 2005-01-05. Source China Education and Research network.

various types, and establishes and improves a system of life-long education.”⁵³ Based on the content of these two articles it can be suggested that as the vision of the state was to change in accordance with the changing requirements of the global economy; the educational policy of the state would also change to meet the social, political and economic objectives of the state.

In addition article 14 emphasized that higher education shall continue to be administered by a state council ensuring that the educational policies that were so developed were not only uniform across the country but also in keeping with the central visions of the government as highlighted under the various five year plans. Article 20 further suggested that the system of national competitive examinations for admission to these higher educational institutions would be continued.⁵⁴ Furthermore, in order to further internationalize China’s education system Article 67-70 laid down guidelines by which not only were the educational institutions allowed to admit foreign students but also steps were taken to ensure that the foreign degrees were recognized in China.⁵⁵

5.3.7 Project 211 (1995)

One very important component of the reforms launched in 1995 was the establishment of Project 211. The Project consisted of the following three major components for development, namely the overall institutional capacity, key disciplinary areas, and public service system of higher education. The primary objective of this project was aimed at “training high-level professional manpower to implement the national strategy for social and economic development, the project

⁵³ Article 11 of the Education Law of the People’s Republic of China promulgated on 2005-01-05. Source China Education and Research network.

⁵⁴ Source: China Education and Research Network http://www.edu.cn/21st_1407/20060323/t20060323_114458.shtml.

⁵⁵ Ibid.

has great significance in improving higher education, accelerating the national economic progress, pushing forward the development of science, technology and culture, enhancing China's overall capacity and international competitiveness, and laying the foundation of training high- level professional manpower mainly within the educational institutions at home.”⁵⁶

Thus, “In principle, projects aimed at strengthening key disciplines and the public service system of higher education were to be integrated in an overall plan and implemented in selected universities for consolidation, upgrading, and improvement, so as to effectively utilize financial resources and bring into full play the overall efficiency of higher education institutions. A small number of key disciplinary areas and other development projects were to be accommodated in other institutions of higher learning.”⁵⁷

By 1997 the Project 211 was being carried out smoothly under the direct guidance of the CPC Central Committee and the State Council, and with the coordination of the State Planning Commission, Ministry of Education and Ministry of Finance. 101 institutions of higher learning nationwide went through sector preliminary examination and a feasibility study was launched to observe how well they can be integrated into each other.

5.3.8 Education Laws of 1998

In 1998 the 9th National People’s Congress introduced a second set of laws related to the development of higher educational policy in China. The law re-affirmed the Marxist-Leninist-Maoist ideology and further incorporated Deng Xiaoping’s theory as a part of the new educational ideology, Article 5 suggested that “the task of higher education was to train senior specialized talents with innovative spirit and practical capability, develop science, technology

⁵⁶ Source: http://www.edu.cn/highedu_1413/index.shtml.

⁵⁷ Ibid.,

and culture and promote socialist modernization.” In addition Article 6 put forward the viewpoint that The state will “continue to be responsible for the formulation of higher education development planning, continue to establish institutions of higher learning and adopts various forms to actively develop the cause of higher education in accordance with the requirements of economic construction and social development.”⁵⁸ In addition article 11, 12 and 13 emphasized that the role of higher educational institutions was to primarily meet the needs of the society. Furthermore the new policy encouraged cooperation between institutions of higher learning as well as supported international exchange and cooperation to improve the quality of higher education.

The most significant aspect of the higher educational policy of 1998 was Article 16. As per this article “Higher curricula education is divided into specialty education, undergraduate education and post graduate education. Higher curricula education should meet the following standards for school work: Specialty education should enable students to master the basic theory and basic knowledge essential for the respective specialty and acquire the basic skills and initial capability for the practical work of the respective specialty; Undergraduate education should enable students to systematically master the basic theory and basic knowledge necessary for the respective discipline and specialty, master the basic skills, techniques and related know-how necessary for the respective specialty and acquire initial capability for the practical work and research work of the respective specialty; and Master's post graduate education should enable students to master firm basic theory of the respective discipline, systematic specialty knowledge, master corresponding skills, techniques and related know-how, and acquire capabilities for the

⁵⁸ Higher Education Law of the People's Republic of China.
http://www.moe.edu.cn/edoas/website18/en/laws_h.htm

practical work and scientific research work of the respective specialty. Doctoral post graduate education should enable students to master firm and broad basic theory, systematic and in-depth specialty knowledge and corresponding skills and techniques, and acquire capabilities for independent creative scientific research work and practical work of the respective discipline.”⁵⁹

This article goes on to suggest that even in a socialist state the objective of the higher educational policy was changing. This article further suggests that the strategic thrust of China’s policy makers was changing in accordance to the changing needs of the labor force.

As the primary source of growth in China during this time period was in the private sector which was financed and spearheaded by numerous multinational corporations; it can be argued that the educational policy of China was not only reacting to the manpower requirements of these multinational corporations; but also was actively bringing about such a change by emphasizing on certain key areas that were in great demand by these multinational corporations. In addition to this law, another important addition was Article 24. This article suggested that the “establishment of an institution of higher learning should conform to the state higher education development planning, accord with state interests and public interest of society and must not take profit making as the object.”⁶⁰

The education law of 1998 was also important because it hints at the inability of the Government of China to provide access to higher education to all its citizens and hence goes on to suggest that the government would not be averse to the idea of entry of non-state organizations and actors into the field of providing education. According to article 60 of this law “Article 60 The state establishes the system of financial allocation as the main source to be supplemented by raising

⁵⁹ Ibid., Article 16

⁶⁰ Ibid

funds for higher education through various other channels to make the development of the cause of higher education to be commensurate with the level of economic and social development. The State Council and people's governments of the provinces, autonomous regions and municipalities directly under the Central Government ensure gradual increase in funds for state-run higher education pursuant to the provisions of Article 55 of the Education Law. The State (also) encourages enterprises and institutions, societies as well as other social organizations and individuals to provide input into higher education.”⁶¹ This aspect is extremely important because it suggests that the communist and socialist government of China is not only unable to meet the educational requirements of its citizens; but also that the government is willing to give up its control over education to some extent. One important explanation for such a change is the economic development of China and the increasing employment opportunities available in China. Since the government run colleges were unable to meet the growing demands of the labor force the only option available for the government of China was to open up higher educational system to the private sector.

5.3.9 China’s 9th Five Year Plan for Educational Development and the Development Outline by 2010 (1996)

The growing influence of the economic development and the increasing demands of the multinational corporations on the labor force of China are aptly exhibited by the 9th Five Year Plan for China’s Educational development as well as the proposed educational development outline by 2010. According to Part II of the development outline “In the next 15 years, the basic guiding philosophy is to prioritize educational development with strategic importance in accordance with the development plan for national economic and social progresses, to further

⁶¹ Ibid., Article 60

proceed the reform on educational system, to optimize the structure of education, to improve education quality and efficiency so that educational development will adapt to the social and economic development. Education will be prioritized with strategic importance for further development to build up a cohesive relationship among education, economy and society.”⁶²

In addition according to Part II(2) “Education is an undertaking which needs to adapt to the future needs, therefore it is necessary to adhere to the principle of 'Three Orientations', which means education should be oriented towards modernization, the whole world and the future. All the development policies and objectives should be finalized according to the principle, so that the systematic structure, development scale and development speed of education will meet the needs of future social progress. In addition, guided by the 'Three Orientation' principle, the reforms on education system, curriculum system, teaching contents and teaching methodologies should be carried out in depth, so that the quality improvement of the public and the specialized talents will adapt to the needs for future development.”⁶³

Furthermore Part II (3) of the 9th 5 year plan suggests that “the reform on educational system needs to be deepened to accelerate educational development. During the transmission process in which the planned economy is being changed to socialistic market economy and the economic growth mode is changed from mass production to intensive one, the initiative of local governments, the society, teachers, and students would not be fully mobilized until the reform on educational system is deepened. Target at the problems of the planned economy, which include the over management of government on education, the Outline for Educational Reform and

⁶² Part II of The 9th 5-Year Plan for China's Educational Development and the Development Outline by 2010. Ministry of Education of the People’s Republic of China.

⁶³ Ibid., II(2)

Development promulgated by the State Council and the Central Committee of CPC has identified clearly the direction and methodologies for the reform on education provision system, management system, educational investment system, the recruitment, fees-charging and student employment for HEIs and secondary specialized schools, and the internal management within schools. It should be one of the most important and urgent tasks for us to implement the Outline to deepen educational reform and establish a new one that will be adaptive to the socialistic market economy.”⁶⁴

In addition to these ideas the changes in the educational policy due to the changing labor force requirements of the economy can be understood by evaluating the following statements. According to Part (IV) on the reforms in the educational sector; “For the reform on student recruitment, fees-charging and graduates employment, during the 9th 5-Year Plan, the two tracks of government-fund student and self-fund students in HEIs and secondary specialized schools should be integrated so all the students should pay fees for education. At the same time, scholarships, student loans, part-time jobs provision, and the remission of tuitions and stipends for poor students should be further improved. With the development of reforms on personnel system and recruitment system, the reform on graduate employment will be further promoted. In the current stage and near future, the employment system will mainly involve meetings between employers and students with both sides having the freedom for final choice. By 2010, a new employment system in which all the graduates will take job-hunting by themselves with the national policy guidance. For those students recruited with clear orientation and those who enjoy

⁶⁴ Ibid., II(3)

earmarked scholarships or oriented scholarships, their employment will be directed in accordance with the previously agreed orientation or contracts.”⁶⁵

Thus, we observe that not only are the 9th Five Years Plan an indication of the growing influence of multinational corporations and their demand on the labor force but also shows that the Government of China is responding to these influences. The government is not only taking steps to reform the higher education sector to increase the supply of qualified labor force, but also is attempting to increase private participation in education as well as facilitate greater interaction between the numerous businesses within the economy and the various educational institutions. These changes adopted by the Chinese government go on to suggest that as FDI inflow and the number of multinational corporations have increased in the Chinese economy, even a closed communist government like China is being forced to react to the changes introduced by these organizations within its economy.

5.3.10 Education Laws of 2002 for Promotion of Privately Run Schools

With the high levels of FDI inflow and a sustained GDP growth rate the government of China came under extremely high level of pressure from the numerous MNC's to increase the creation of human capital to meet their manpower requirements. Thus, at this stage the Government of China introduced laws in 2002 which encouraged the development of private educational institutions. Although the government did take steps to regulate the growth and development of these private educational institutions by incorporating laws which not only ensured the rights of the educates but also ensured that these private educational development continued to be under state auspices and followed the general development goals as outlined under the various five year plans; but it has been unsuccessful.

⁶⁵ Ibid., (IV)

Article 1 of this law suggested that the “Law was enacted in accordance with the Constitution and the Education Law with a view to implementing the strategy of invigorating the country through science, technology and education, promoting the sound development of privately-run schools, and safeguarding the lawful rights and interests of the privately-run schools and the educatees.” Furthermore article 7 of this law suggested that the “administrative department for education under the State Council shall be in charge of the overall planning, comprehensive coordination and macro-administration of the work relating to privately-run schools nationwide.” In addition Article 10 was of the view that “the establishment of a privately-run school shall meet the local need for educational development and the requirements provided for by the education Law and relevant laws and regulations.”⁶⁶

The law also attempted to ensure government control over the growth and operations of these private educational institutions. Article 20 “suggested that the executive council or the board of directors of the school shall be composed of not less than five persons, with one of them serving as chairman of the council or board. The name list of the chairman and members of the council or the chairman of the board and directors shall be submitted to the examination and approval authority for the record.” Furthermore article 29 asserted that “privately-run schools shall conduct ideological and moral education and professional training among teachers.” This was done to ensure that a political indoctrination of the teachers at these private educational institutions took place before these teachers started teaching any new students. In addition to these controls Article 39 further suggested that “Administrative. Departments for education and

⁶⁶ Source: China Education and Research Network.
http://www.edu.cn/21st_1407/20060323/t20060323_115128.shtml

the relevant departments shall provide guidance to privately-run schools in respect of education and teaching and training among teachers.”⁶⁷

Steps were also taken to rationalize the tuition fees structure as well as ensure protection of the rights of the educatees. Article 37 state that “the items and rates of fees to be collected by privately-run schools from educatees who receive education from academic credentials shall be worked out by the schools, submitted to relevant departments for approval and made public; and the items and rates of fees to be collected from other educatees shall be worked out by the schools concerned, submitted to relevant departments for the record and made public.” Furthermore under Article 57 “When a privately-run school is to be terminated, it shall make proper arrangements for the students in school. When a privately-run school providing compulsory education is to be terminated, the examination and approval authority shall assist the school to make arrangements for the students to continue their studies.”⁶⁸

This law was a major step in bringing about a radical shift in the structure of China’s higher educational policy. As a result of this shift the number of private educational institutions has increase rapidly from a figure of 0 in 2002 to the current figure of 278 in 2007.⁶⁹ Although these private educational institutions are under the auspices of the government; however they have the freedom to formulate their own course structures as well as charge their own tuition fees. As private educational institutions are primarily for-profit organizations they attempt to enhance the prestige of their institutions by attempting to develop a placement record for their students that

⁶⁷ Source: China Education and Research Network. http://www.edu.cn/21st_1407/20060323/t20060323_115128.shtml.

⁶⁸ Ibid.,

⁶⁹ Contained in the new report by Xinhua of March 28, 2007 titled Number of private educational students exceeds 2.8 million in China. http://english.peopledaily.com.cn/200703/28/eng20070328_361630.html

rival their peers. Thus, these educational institutions primarily cater to the changing needs of the labor force by providing managerial, technical and other vocational education that may be in demand at that particular time period. Therefore, this change in China's educational policy which allowed the emergence of private educational institutions further bolsters the claim that China's educational policy has been influenced by economic development fuelled by FDI inflows and activities of multinational corporations within the state.

5.3.11 Conclusion: Case Study of China

Therefore based on the above case study it is observed that in the case of China, an increased FDI inflow as well as an increase in the presence of multinational corporations has significantly impacted the educational policy of China. Although initially, the primary objective of the educational policy in China was to indoctrinate its citizens with the ideology of the communist party; however with an opening of China's economy as well as due to an increase in the inflow of FDI into China, the structure of the economy underwent a change. China was not only slowly integrated into the global economy, but also started reacting to the variations in the global economy. One consequence of the massive FDI influx into China was the entry of a large number of global multinational corporations. As a result of their presence within the Chinese economy, there was an increase in employment opportunities available to Chinese citizens. As China's economic development was fuelled by these multinational corporations the communist Government of China was forced to react to the changing socio-economic scenario.

Thus, as a result of all these factor not only did the government of China further ease restrictions for the entry of multinational corporations into China; but also attempted to meet the manpower requirements of this rapidly changing economy by adopting an educational policy that fulfilled the human capital requirements of these MNC's. An evaluation of Table 5.6 shows that not only

has there been an explosion in the number of institutions of higher education, student enrolments and student graduation rates the unemployment levels have consistently been at a health rate of 2% to 4%. Therefore it can be safely concluded that in the case of China multinational corporations have influenced the educational policy of the state.

5.4 Conclusion

Thus, based on the evaluation of the two case studies of India and China we observe that the null hypothesis i.e. If the economy of a state has witnessed high levels of economic development fuelled by Foreign Direct Investment then that state will adopt an educational policy under the influence of FDI to meet the manpower requirements of multinational corporations; holds true. The two qualitative case studies in conjugation with our argument in the above chapters go on to suggest that FDI inflow and an increase in the presence of MNC's have played a major role in impacting the evolution of higher education policies in both India and China. This finding, however raises the question of why did FDI influence the educational policies of these countries?

Chapter 6

FDI AND ITS INFLUENCE ON EDUCATIONAL POLICY: THE CAUSES EXPLORED

6.1 Introduction

Based on the qualitative as well as quantitative analysis conducted by me in the previous chapters we observe that Foreign Direct Investment (FDI) has had an influence on the educational policies of both China and India. The question that comes up at this stage is; why did FDI influence the educational policies of these states? What makes this aspect of the question more interesting is that besides the inflow of FDI these two states do not share any feature in common. While India is a democracy; China is a communist and a socialist country. In addition both these countries are completely different from each other in terms of culture, identity and even ethnicity. Thus, in this chapter I will attempt to evaluate the variables that can be considered as an explanation for why FDI or Multinational Corporations (MNC's) have been responsible for influencing the development of educational policy in these two states? The answer to this question will not only enable me to evaluate whether these two states have witnessed sustainable development or not; but also will enable me to give tangible policy recommendations that might be of help to other developing states and how they can mitigate the influence of FDI on their education policies and ensure sustainable development within their societies.

6.2 India: Factors responsible for Influencing India's Education Policy

As per the analysis conducted in Chapter Four and Chapter 5 it was observed that the inflow of FDI and the entry of multinational corporations into the Indian economy, post the liberalization

of the Indian economy in 1991, significantly impacted the educational policy. The educational policy became more responsive to the labor and manpower requirements of the multinational corporations and their ancillary industries that were fuelling such a high level of economic growth. The higher education policy that developed primarily aimed at producing a large number of technical and managerial labor force who could meet the immediate requirements of these multinational corporations. Thus, in order to understand why FDI was able to impact the development of the education policy we need to evaluate this question from two aspects. The first factor is the analysis of sectoral inflow of FDI into the Indian economy and the second aspect is the resulting stress on producing a large number of technical and managerial manpower.

6.2.1 Nature of FDI Inflow into India: Sectoral Preference

In order to understand the reason why FDI or Multinational Corporations were able to influence the higher educational policy of India we need to evaluate the countries from where FDI inflow into India was taking place as well as the specific sectors into which the FDI inflow took place. Such an evaluation will enable us to understand what type of skill sets would have had been required by the multinational corporations who were setting up base within the Indian economy and how the new educational policy that evolved post 1991 was primarily aimed at meeting these labor requirements.

Therefore if we evaluate the data in Figure 3.15 we observe that between August 1991 and September 2005 massive amount of FDI took place into India. It is interesting to notice that the FDI inflow into India was primarily from the Western countries. The maximum amount of FDI inflow was from Mauritius which accounted for \$ 10,096 Million. Mauritius is a small island in the Indian Ocean and has adopted numerous economic policies that have made it into a tax

haven. Therefore even though the money being fuelled into India was from western states it was channeled through Mauritius to save taxes by numerous MNC's. In addition we observe that during the same period figures of FDI inflow into India from US were \$ 4,856 Million, from Netherlands it was \$ 1,954 Million, UK accounted for \$ 1,905 Million in FDI inflows and a similar figure from Germany was \$ 1,317 Million. If we compare the similar data between April 2000 and December 2008 we observe that the trend not only continues but also intensifies. An evaluation of the data in Table 6.1 shows that between April 2000 and December 2008, total cumulative inflow of FDI from Mauritius was equivalent to \$ 34,241 Million or 44% of the total FDI inflow that took place into India during the same time period. In addition during the same time period U.S. accounted for 8% of the FDI inflow into India (\$5,868 Million), U.K. for 7% (5,142 Million), Netherlands for 5% (\$3,524 Million), Germany for 3% (\$2,112 Million) and France for 3% (\$1,172 Million). Thus, the data goes on to show that 70% of FDI inflow into India was from the developed countries who account for the majority of multinational corporations.

Furthermore, if we evaluate the data in Table 6.2 and 6.3 we get a better picture of the industries in which the FDI inflow was taking place. As per the data in Table 6.2 we observe that between August 1991 and Jan 2006 the maximum amount of FDI inflow took place into the Electrical Equipments sector (16.2% or \$4,907 Million) followed by the transportation sector (10.19% or \$3,169 Million), Service Sector (9.52% or \$3,001 Million), Telecommunications (9.38% or \$2,894 Million), Fuels (8.81 % or \$2,691 Millions) and Chemicals sector (6.56% or \$2,127 Millions). A further analysis of sectoral FDI inflow into India between the years 2000 and 2008 (Figure 6.3) shows that although the rankings of sectors in which FDI inflow took place in figure 6.2 did change in figure 6.3; but all the sectors did remain in the top 10 category. As per the data

in figure 6.3 the maximum amount of FDI inflow between April 2000 and December 2008 took place in the service sector. The total cumulative FDI inflow into the service sector was to the tune of \$17,018 Million or 22% of total FDI inflow that took place in India during this period. Furthermore FDI inflow into the Computer Software and Hardware sector was 11% (\$8,832 Million) of the total FDI inflow into India. The telecommunications sector accounted for 8% (\$6,201 Million) of the FDI inflow, the construction sector accounted for 6% (\$4,950 Million), the automobile industry for 4% (\$3,026 Million), the power sector accounted for 4% (\$2,805 Million), the petroleum and natural gas sector accounted for 3% (\$2,238 Million) and the Chemical sector accounted for 3% (\$1,947 Million) of FDI inflow into India.

Thus, based on these data points we observe two very important trends. First of all the majority of the FDI inflow that took place into India was from the western countries. This implies that the multinational corporations that were entering into India to set up operations were primarily from the developed countries of the world. Furthermore the data also highlights the fact that the FDI inflow that took place into India between 1991 and 2008 was skewed in favor of certain sectors of the economy. Much of this was due to the way in which the Indian economy was liberalized, but was also an evidence of the type of multinational corporations that were entering into India. Since the majority of the FDI inflow that was taking place into India was primarily into the high technology, engineering and service sector; it can be argued that the MNC's that were setting up operations in India were primarily MNC's that had functional expertise in one of the 10 sectors that have been mentioned above. This argument is further strengthened by the analysis of the data in table 6.5 and table 6.6.

The data in table 6.5 discusses the country wise foreign technical collaboration approvals that took place in India between 1991 and 2008. This data is relevant because it discusses the number

of technical collaborations between Indian firms and foreign multinational corporations. As per the data the United States ranks as the number one country with which India approved the maximum number of technical collaborations i.e. 1,812 technical collaborations (22.58%). The second place is occupied by Germany (1,110 collaborations or 13.83%) followed by Japan (874 collaborations or 10.89%), the United Kingdom (868 collaborations or 10.81%) and Italy with 485 collaborations (6.04%). This data goes on to show that the maximum number of foreign collaborations in technical field was done between Indian companies and western multinational corporations. Furthermore the data in table 6.6 identifies the sector wise technical collaboration approvals that were made between 1991 and 2008. As per the data the maximum number of technical collaborations between Indian companies and foreign multinational corporations took place in the Electrical Equipments sector (15.67%). The second place was occupied by the Chemical sector (11.18%) followed by the Industrial Machinery sector (10.86%), the transportation industry (9.37%) and the Machine engineering industry (5.53%).

Thus, based on the analysis of these data points we observe that as the maximum amount of FDI inflow into India was taking place into the service sector as well as specialized skills sector it implies that the multinational corporations that were establishing themselves in India post 1991 were MNC's that had functional expertise in these sectors. Since these sectors are specialized sectors they would have had required qualified managerial and technical workforce who could have had assisted them in their operations in India. Thus, as a result of their labor demands the government of India reacted to improve the supply of such manpower. One manner by which the government of India attempted to meet these labor requirements of these various multinational corporations was by bringing about a change in the educational policy of India. As previously discussed in Chapter four and Chapter five; the government of India changed its educational

policy under the influence of FDI in order to meet the labor requirements of these multinational corporations.

Thus, if we evaluate the data in Table 6.7 we observe that there has been a major shift in the growth and development of higher educational institutions in India. If we first analyze the data on colleges for general education we observe that in 1980 there were only 3,421 colleges. This figure gradually increased to 6,089 by 1994. However as the economic reforms began to influence the Indian economy we observe that there was a major increase in number of educational institutions. By the year 2000 the numbers of colleges for general education increased to 7,929 and were at a figure of 11,698 in 2005. A similar figure in terms of deemed universities highlight a comparable trend. In 1980 there were only 110 Universities. This figure increased gradually to 228 by 1996 and in 2005 was at 350. The trend appears to be more pronounced if we analyze the growth of total number of higher educational institutions in India between 1980 and 2005.⁷⁰ Table 6.7 highlights that, in 1980 the total number of higher educational institutions stood at 7,073. This figure gradually increased and reached a figure of 8,149 by 1995. However, post 1995 there was a major shift in the growth of higher educational institutions in India. By the year 2000 the number of higher educational institutions had reached a figure of 10,406 and in 2005 was at an all time high of 17,332. Thus, the data goes onto show that due to an emphasis on certain sectors of FDI inflow there was a greater demand for certain types of educational expertise. This has resulted in the phenomenal growth of educational institutions to meet this particular manpower demand by multinational corporations.

⁷⁰ Data is available only till 2005. Data post 2005 has not been made available by the Government of India.

6.2.2 Stress on Creating Managerial and Technical Manpower: The role of Private Educational Institutions

With an increase in the growth of FDI inflow into India we observe that there was an increase in demand for manpower with trained and managerial skills. As the Government of India was unable to cater to these increasing demands of these MNC's it opted for a change in the educational policy. One aspect of the new educational policy developed by the Government of India was to allow the establishment of private educational institutions. Thus, as a result there was not only a phenomenal increase in the number of colleges for professional higher educational institutions but also this increase was primarily a result of private initiative.

If we evaluate the data in Table 6.7 we observe that in 1980 there were only 542 colleges for professional education. This figure gradually increased to 1,230 by 1994. However as the economic reforms began to influence the Indian economy we observe that there was a major increase in number of educational institutions. By the year 2000 the numbers of colleges for general education increased to 2,223 and in 2005 was at an all time high of 5,284 educational institutions. This analysis is further strengthened by the data in Table 6.8. The data shows that not only were there a significant increase in number of professional educational institutions between 1999 and 2005, but also that "a large number of professional institutions – engineering, medicine, management, teacher education have come up in the private sector over the last 2-3 decades. At present, in the professional stream, nearly 80 per cent of all institutions and enrolments are in the private sector."⁷¹ The data highlights that in 1999 the total number of professional higher educational institutions was only 3,730; however by the end of 2005 the

⁷¹ Pawan Agrawal in his working paper No. 180. Page 47.

figure was at 9,947 showing a 167 percentage increase⁷². If we analyze the data based on the courses being taught the influence of MNC's on the higher educational institutions become more pronounced. In 1999 the number of engineering institutions was 669. This figured increased to 1,478 by 2005 showing an increase of 121%. Similarly, the number of pharmacy colleges increased by 208% and the MBA colleges by 55%. The role of private sector in this increase is also extremely important. The data shows that in 2003-2004 private sector accounted for 78% of the increase in professional higher educational institutions while the role of the public sector was limited to only 22%. Thus, the analysis of the data goes on to show that the private sector has played a very important role in the development of higher educational professional institutions in India post the liberalization of the Indian economy in 1991.

6.2.3 India's New Educational Policy and its Social Impact

As a result of India's new educational policy numerous changes took place in the system of higher education in India. The number of general colleges increased from 370 in 1950-51 to 9,427 in 2003-2004. Furthermore the number of professional colleges increased from 208 in 1950-51 to 2,751 in 2003-2004. If we were to break this figure down we observe that the number of universities increased from a figure of 184 in 1990-1991 to 266 in 2000-2001 and 348 in 2005-2006. On the other hand the number of colleges increased phenomenally from 5,748 in 1990-1991 to 11,146 in 2000-2001 and 17,625 in 2005-2006 (Agrawal, 2006). Although such an increase in educational institutions is extremely beneficial for the social growth of any society, but the manner in which the educational institutions increased did not result in an equitable spread of the benefit of education. The growth of higher education in India has been categorized

⁷² The reason for a discrepancy in the data between Table 6.8 and 6.9 might be due to different data collection methodologies adopted by these different agencies or the measurement of the data.

as falling under three categories. The first phase was from 1960-1980, the second phase was from 1980-2000 and the third phase was from the year 2000 onwards.⁷³ It was during the second phase that the concept of higher education supported by the private sector emerged (Table 6.8). This was a period of transition within the Indian economy. Not only was the economy starting to boom, but with the entry of a large number of multinational corporations the requirement for a skilled manpower was increasing. Furthermore since February 2000, foreign direct investment was also being allowed in education in India without any sectoral cap.⁷⁴ Since the government did not have the resources to bring about a rapid expansion in terms of educational institutions, the private sector took the initiative and stepped in to fill the void. A large number of private medical, engineering and management schools opened up throughout the country.

Although we have observed that the government of India came out with a new educational policy due to the impact of globalization in general and to meet the manpower requirements of multinational corporations in particular, however an aspect that we still need to consider is how does the growth of higher education supported by private sector results in growth of social tensions within the society. The primary reason for this is that private educational institutes unlike government run institutions are a for-profit organization. For them imparting education is not a fulfillment of social and societal need but a source of revenue and another business venture. Since these private educational institutions only have a profit motive, the tuition and other fees charged by them are exorbitantly high. Thus, in India not only are the students being exploited

⁷³ Part 5: Promoting Efficiency and Effectiveness at all levels. National Policy on Education 1986.Revised in 1992. The Department of Education. The Government of India. Page 8.

⁷⁴ Vide Order No.7(4)/2000-IP dated 11 February, 2000, issued by the Department of Industrial Policy & Promotion

by these private educational institutes by having to pay high tuition fees, but also these students are exposed to sub-standard education. (Agrawal, 2006)

Since the fees to these institutions are exorbitantly high not all segments of the society are able to study in these institutions. Another factor that prevents enrolment of disadvantaged sections of the society in these private educational institutions is the fact that as the entrance to these institutions is through a process of competitive examinations, an intensive pre-examination training is required. Such training is again provided by private coaching institutes and hence the disadvantaged sections of the society are not in a financial position to take advantage of these opportunities. Thus a situation exists wherein a large segment of the Indian population is unable to seek admission to these institutes.⁷⁵

Furthermore as some of these private educational institutes provide substandard education to students, the industry reputation of these institutes is not very good. As there is a lack of any reputable methodology for ranking schools and colleges in India the students are continuously duped by the tall claims made by these private educational institutions. (Agrawal, 2006) Thus, students who graduate from these institutions are unable to secure jobs that they aspire for, primarily because the businesses are not willing to hire graduates from these suspect universities. Therefore, due to a dichotomy in the needs and wants of the society there is a growth of frustration in the society. This frustration is at two levels. At the first level we observe that there is a very large section of the population that is unable to secure admission to the government operated Universities. Since this segment of the population does not have the financial resources to study in private educational institutions it has no option but to take up jobs that do not meet up

⁷⁵ This view point is based on the author's personal experience with the educational system in India. This view is also supported by the paper "Higher Education in India: A Need for Change". Working paper No. 180 by Pawan K. Agrawal. ICRIER. June 2006, pp 18

to their aspiration level. As the majority of the industrial development and foreign direct investment is taking place in select regions and cities of India (Table 6.4) these people with basic levels of education go to these cities in search for a job. As they do not have a high skill level, they are forced to accept any employment that they are able to succor. Thus, these people are forced to live in forced penury or in slums with inhabitable living conditions.

This situation is further worsened by the existence of caste conflict in India. In India caste system has been traditionally very strong. In the past the lower segments of the society were denied opportunities to grow and progress. However with the emergence of a modern India steps were taken to improve the lot of the lower caste. One initiative in this regard was taken in 1990 when the then Indian Prime Minister V.P. Singh implemented the report of the Mandal commission.⁷⁶ As per the main recommendations of this report, reservation was introduced for the lower caste in all government jobs and government aided educational institutions. This act in 1990 was a catalyst for a large demonstration by students who belonged to upper castes. These demonstrations continued for a few months with violent clashes between the students and the police. However as the government refused to back down these demonstrations petered out. However in 2005, the Government of India strengthened the reservation system by introducing a bill in the parliament which stated that reservations should be further provided for the lower castes in private educational institutions.⁷⁷ This act of the government was vehemently opposed by students who belonged to the upper caste. They were of the opinion that admission should be on the basis of merit only and affirmative action for the lower caste should not be extended to private educational institution. They felt that such an act would further reduce the educational

⁷⁶ “Diluting Mandal” The Hindu. June 24th, 2003.

⁷⁷ “The Reservation Riddle” The Times of India. May 3rd, 2007.

opportunities available to them as well as highly intensify competition for the un-reserved seats in the private educational institutions. This bill has again re-ignited social conflict and social tensions in India. The conflict this time is not due to the traditional rivalries between the upper and lower castes in India, but primarily due to the lack of quality educational opportunities available to students in India, and consequently the growing perception among upper caste students that providing reservation to lower caste students will deny them opportunities to gain admission to these private institutes to study further and eventually be a part of the economic boom that is sweeping across India. Furthermore this anger within the upper caste youths is not only against the lower castes but also against the Indian government. They are of the opinion that the government has failed to live up to their expectations and hence such a situation has not only resulted in growth of social tension but also a decrease in loyalty towards one's government.⁷⁸

Thus, the commercialization of education in India has resulted in a growth of large number of problems. The national seminar on privatization and commercialization of higher education held in May 2006 in India pointed out these aspects and stated that 'Commercialization of higher education can have adverse implications, both in terms of access and equity. It may even create internal imbalances and distortions in higher education such as excessive importance to the IT - related sector at the cost of the Social Sciences and the Humanities. Commoditization of education, research and knowledge will not serve the long range interests of the nation. It could lead to truncated growth and lop sided development of higher education. The applied aspects

⁷⁸ 'Rather than Reservation in Private Sector make them entrepreneurs instead'. Business Line. The Hindu. August 12, 2004.

may acquire importance at the cost of other dimensions, thus neglecting vast pools of traditional knowledge acquired over the centuries. Therefore, commercialization needs to be controlled.⁷⁹

6.3 China: Factors responsible for Influencing China's Education Policy

As per the analysis conducted in Chapter Four and Chapter 5 it was observed that the inflow of FDI and the entry of multinational corporations into the Chinese economy significantly impacted the educational policy. The educational policy became more responsive to the labor and manpower requirements of the multinational corporations and their ancillary industries that were fuelling such a high level of economic growth. The higher education policy that developed primarily aimed at producing a large number of technical and managerial labor force who could meet the immediate requirements of these multinational corporations. Thus, in order to understand why FDI was able to impact the development of the education policy we need to analyze the sectoral inflow of FDI into China's economy and the impact it has had on China's society.

6.3.1 Nature of FDI Inflow into China: Sectoral Preference

In order to understand the reason why multinational corporations were able to influence the higher educational policy of China we need to evaluate the regions from where FDI inflow into China was taking place as well as the specific sectors into which the FDI inflow took place. Such an evaluation will enable us to understand what type of skill sets would have had been required by multinational corporations entering into China, and consequently how the new higher educational policy that evolved post 1990 was primarily aimed at meeting these labor requirements. An analysis of the data in Table 3 highlights that between 1993 and 2006 massive

⁷⁹ Recommendations of the National Seminar on Privatization and Commercialization of Higher Education held on May, 2, 2006, as laid on the table in response to a question raised in Parliament. Lok Sabha Unstarred Question No 129 (answered on July 25, 2006)

amount of FDI inflow took place into China. Furthermore, an analysis of the regions from where the FDI inflows took place (Table 6.10); shows that the maximum amount of FDI inflow into China was from Asian countries followed by the western countries based in North American and Europe. Till 1997 the majority of FDI inflow took place from Asian countries (\$ 34,276 Million), followed by FDI inflow from western countries (\$10,109 Million). However, as China's economic growth continued; the FDI inflow from Asian countries decreased but the rate of FDI inflow from developed countries continued unabated. By 2006 FDI inflow into China from Asian countries had decreased to \$7,663 Million while the share of FDI inflow from the western nations increased to \$11,331 Million. The data goes on to show that although the "Bamboo network" did play a major role in the initial development of the Chinese economy; the role of "non-bamboo network" multinational corporations in promoting China's economic development cannot be denied. Furthermore it would be incorrect of us to assume that even during the initial stages of China's economic growth the "Bamboo network" was primarily responsible for FDI inflow into China from the Asian countries. The data shows that the majority of FDI inflow into China was taking place from Hong Kong. This aspect is important because a large number of western MNC's were based in Hong Kong and operated their East Asia operations from that territory. Thus, it can be assumed that a large number of MNC's from other parts of the world did invest in China, but their investments were not broken down to reflect the true picture.

Furthermore, if we evaluate the data in Table 6.11 we get a better picture of the sectors in which the FDI inflow was taking place. As per the data in Table 6.11 we observe that between 1997 and 2006 the maximum amount of FDI inflow took place into high technology, manufacturing and service sectors. The data shows that in 2003 the total amount of FDI inflow into the Leasing and Business services sector was only 279 \$ Million; however this figure reached 4,522 \$ Million in

2006. Furthermore if we evaluate the mining sector we observe that in 1997 the total amount of FDI inflow was 940 \$ Million. This figure increased to 1.379 \$ Million in 2003 and was at 8,540 \$ Million in 2006. In wholesale and retail trades sector the total amount of FDI inflow was to the tune of 1,402 \$ Million in 1997. This figure increased to 1,664 \$ Million by 2002 and in 2006 was at 1,114 \$ Million. A further evaluation of Table 6.11 shows that some other top performing sectors who exhibited a similar trend were Transportation and storage, manufacturing, real estate, construction, information technology, scientific research and power sectors.

Based on these data points we observe two very important trends. First of all, as the majority of the FDI inflow took place into China from the western countries; the multinational corporations that were entering into China were primarily from the developed countries of the world. Furthermore the data also highlights the fact that the FDI inflow that took place into China between 1997 and 2008 was skewed in favor of certain sectors of the economy. Much of this was due to the way in which China's economy was opened up, but is also an evidence of the type of multinational corporations that were entering into China. Since the majority of the FDI inflow taking place into China was primarily into the high technology, engineering and service sector; it can be argued that the MNC's that were setting up operations in China were primarily MNC's that had functional expertise in one of the 10 sectors identified in Table 6.11.

6.3.2 China's New Educational Policy and its Social Impact

Thus, based on the analysis of these data points we observe that as the maximum amount of FDI inflow into China was taking place into the service sector as well as specialized skills sector; the MNC's entering these sectors would have had required qualified managerial and technical workforce to assist them in their operations. Thus, as a result of the growing labor demands of the multinational corporations the government of China attempted to improve the supply of such

manpower by bringing about a change in the higher educational policy of China. This aspect is further evidenced by evaluating the growth of higher educational institutions in China between 1978 and 2006. (Table 5.6) The data shows that there has been a steady increase in number of higher educational institutions in China. In 1977 the number of higher educational institutions in China was only 404. This figure increased to 1,075 by 1990 and in 2006 was at 1,867. Although this increase may not seem phenomenal but when we compare the data on number of total enrolments as well as graduates from these higher educational institutions we get a correct picture of the scale of change in China's higher educational system. If we evaluate the data on total enrolment in these higher educational institutions we observe that in 1980 enrolled students numbered only 1.17 million. This figure gradually increased, and by 1999 the number of enrolled students reached 4.13 million. However as China's economy boomed and the educational reforms introduced by the government of China took hold the number of students enrolled in higher educational institutions increased substantially. By 2001 the total enrolment in higher educational institutions had reached a figure of 7.19 million and continued to increase reaching 13.34 million in 2004 and 17.39 million in 2006. All these data go on to show that post 1990, not only was there a change in the higher educational system in China but also the change was drastic and extremely rapid resulting in an increase in higher educational institutions to meet the growing demands of the economy as well as the labor requirements of multinational corporations.

Although a change in an educational policy in response to economic development is not only expected but desirable, but in the case of China we observe that the new higher educational policy evolved primarily in reaction to the manpower requirements of multinational corporations. Based on the data in Table 5.6 we observe that till the year 2000 the number of graduates from

higher educational institutions in China used to number less than a million. However, post 2000 there was a change in the graduation rates and by 2004 the number of graduates from higher educational institutions stood at 2.39 million. This figure crossed the 3 million mark in 2005 and in 2006 reached a figure of 3.77 million. Thus, we observe that within a short span of time a large number of educated and technically qualified individuals entered into the labor market. However, in spite of China's phenomenal economic growth these individuals have not been absorbed within the labor market resulting in social stress within the Chinese society.⁸⁰

Furthermore, there has also been an increase in the growing competition for scarce jobs. "The number of new graduates, nearly five million a year by 2007, is expected to increase between 700,000 and one million each year for the rest of this decade. The number of students who leave university without a job to go to has also grown rapidly. Job fairs attract thousands of well qualified graduates, all vying for a few posts: a public examination for 10,000 places in the civil service in 2006 was reported to have received a million applications."⁸¹ This situation has been further intensified due to China's one child policy. In China, as each family is dependent upon their only child for their future prosperity; the families tend to take on a large debt in order to finance their children's education. However, if these students are not gainfully employed post their graduation from institutions of higher learning; it not only creates social and economic stress upon the family but also on the students themselves. This situation has been further worsened due to an increase in the fees being charged by not only the private educational

⁸⁰ This viewpoint can be substantiated based on the news report "Severe Jobless Problem in China" in BBC. Dated 9th March 2008. (<http://news.bbc.co.uk/2/hi/asia-pacific/7286024.stm>) and the article by Zhao, Litao and Sixin Sheng. 2008. "Fast and Furious: Problems of China's Higher Education Expansion". EAI Background Brief No. 395. <http://www.eai.nus.edu.sg/BB395.pdf>.

⁸¹ Duncan Hewitt, *China: Getting Rich First*, (New York: Pegasus Books, 2008) pp. 207.

institutions but also the state universities.⁸² The burden is worse on students from rural families. “One student’s fee alone is maybe a year’s income for a peasant.”⁸³ Furthermore, “stories of rural families as well as urban families struggling to cope with the cost of education have become increasingly common in Chinese media – there have been a number of reports of parents who have committed suicide after learning that their children have won a place at a university, out of fear and shame that they will not be able to afford the fees.”⁸⁴ Thus, it can be argued that the new higher educational policy has resulted in mass production of qualified human capital which has not been effectively employed. As the number of graduates from institutions of higher learning is expected to increase in the future; it can be argued that with the current global economic crisis⁸⁵ the unemployment problem within China is bound to increase.

6.4. Conclusion

Therefore it is observed that, an increased FDI inflow and MNC presence has significantly impacted the higher educational policy of both China and India. One consequence of the massive FDI influx into both these countries was the entry of a large number of global multinational corporations. As China and India’s economic development was fuelled by these multinational corporations, the Governments of China and India were forced to react to the changing socio-economic scenario. Thus, as a result of all these factor both the Governments attempted to meet

⁸² This view is based on the book by Duncan Hewitt, *China: Getting Rich First*, pp. 188-210 and the news report “Chinese mothers lose children, livelihood in fatal wreck” in CNN by Elliott C. McLaughlin dated 23rd February 2009. <http://www.cnn.com/2009/US/02/23/china.parents.ohio/>

⁸³ Professor Zhang Minxuan of the Shanghai Education Commission quoted in the book by Duncan Hewitt, *China Getting Rich First*, pp. 194.

⁸⁴ *Ibid.*, pp 194-195.

⁸⁵ “Slowdown stalks the globe”. BBC Radio World Service. 13th November, 2008. http://www.bbc.co.uk/worldservice/news/2008/11/081113_round_robin_economy.shtml

the manpower requirements of this rapidly changing economy by adopting an educational policy that fulfilled the human capital requirements of these MNC's. Although such an increase in higher educational institutions is extremely beneficial for the socio-economic growth of any society; the circumstances under which the educational system has changed in these two countries has not resulted in an equitable spread of the benefit of education. Such a scenario has resulted in an increase in the number of graduates who are not being easily absorbed in the labor force resulting in an increase in educated unemployment as well as social stress on the societies of China and India. The Chinese government as well as the Indian governments are caught between the forces of the multinational corporations and the private sector on one side and the demands of its citizens on the other, and are unable to effectively balance between the two. Thus, although globalization has ensured that both China and India are considered as one of the fastest growing economies in the world; it has also created social and economic problems within their societies.

Chapter 7

CONCLUSION

7.1 Introduction

In the preceding six chapters I have evaluated the impact of Foreign Direct Investment (FDI) on educational policies of India and China we observed that with the growth of globalization not only has there been an increase in FDI inflow into these two countries, but such an FDI inflow has been synonymous with the entry of multinational corporations (MNC's) into the economy of these two states. Thus, the educational policy of these two states has changed resulting in the growth of higher educational institutions whose primary objective is to fulfill the labor requirements of the various multinational corporations. As a result there has been an increase in the number of higher educational institutions as well as graduates from these institutions resulting in an increase in educated unemployment and the resulting social stress on the societies of both of these two countries.

Thus, in this chapter I plan to bring together all the ideas discussed in the preceding chapters and evaluate whether the hypothesis formulated by me hold true or not? I will also discuss the theoretical implication and policy implications of this study. Finally I will discuss the limitations of the study and provide suggestions for future studies on this topic in order to develop a comprehensive understanding of how FDI and MNC's influence educational policies in developing countries.

7.2 Summary of Key Findings

At the commencement of this dissertation I put forward certain hypothesis which I suggested that I would test during the course of the study. I will now restate these hypotheses and discuss whether they have been tested effectively or not and what has been the conclusion with respect to them. Thus, I had suggested the following hypotheses:

H₁: *If the economy of a state witnesses economic shocks then these shocks will result in an institutional change within the state resulting in the development of new economic policies to attract multinational corporations through the mode of foreign direct investment to promote economic development.*

H₂: *If a state has initiated a new strategic thrust fuelled by foreign direct investments channeled inwards through multinational corporations then the multinational corporations will influence the higher educational policies of such a state in order to develop a human capital that fulfils the manpower requirements of these multinational corporations.*

H₃: *If a state initiates a new strategic thrust based on its long term national goals then the state will formulate a new educational policy which will result in the creation of a labor force that is utilized effectively within the economy of that state and hence will not only meet the manpower requirements of multinational corporations but also will bring about sustainable economic development of the state.*

Based on the case study methodology as well as the quantitative methodology adopted by me I went ahead and tested each of these hypotheses. In order to test these hypotheses I had to first

identify the causality between FDI and educational policy, and whether FDI actually influences educational policy of these two countries or not? Based on the regression analysis conducted by me in Chapter 4, and the qualitative comparative case study analysis conducted by me in Chapter 5; I was able to convincingly highlight the impact of multinational corporations on the higher education policy of both India and China. The first hypothesis that was evaluated by me was:

H₁: *If the economy of a state witnesses economic shocks then these shocks will result in an institutional change within the state resulting in the development of new economic policies to attract multinational corporations through the mode of foreign direct investment to promote economic development.*

Based on the case study of India and China I was able to convincingly show that both these two countries witnessed exogenous economic shocks which resulted in an institutional change in terms of economic policies within these countries. As a result of these economic shocks new economic policies were introduced in both India and China to bring about a rapid development of their respective economies. This hypothesis was also found to hold true based on the case study of India and China. In both these countries the economic policies adopted by the various governments aimed to achieve two objectives. First of all to open up and liberalize the economy to ensure that it is in par with the global standards. The second objective was to attract foreign direct investment and multinational corporations into their economies to promote economic development. In both these cases it was observed by me that FDI and MNC's played a very important role in promoting economic growth within these two states.

The second hypothesis formulated by me was:

H₂: *If a state has initiated a new strategic thrust fuelled by foreign direct investments channeled inwards through multinational corporations, then the multinational corporations will influence the higher educational policies of such a state in order to develop a human capital that fulfils the manpower requirements of these multinational corporations.*

Based on the analysis conducted by me it was observed that this hypothesis also holds true. The FDI inflow into both India and China resulted in the growing importance of MNC's within the economy of these two countries. As these MNC's were primarily responsible for promoting economic development within these countries the Governments of both these countries attempted to attract further FDI inflow into their economies by attempting to develop high quality human capital which was able to work at competitively lower prices as compared to the rest of the world. A consequence of this was a radical shift in the higher educational policies of both India and China. The new higher educational policy adopted by these states resulted in a growth of a large number of educational institutions as well as an increase in graduates from these educational institutions equipped with expertise that were most in demand by the various multinational corporations. The evaluation of the case of both India and China also showed that as a result of the new higher educational policy developed by both of these states there was a massive spike in graduates who were ready with skills most in demand by the labor market primarily owned and operated by the various multinational corporations. However, since there was a mismatch in the supply and demand of human capital a situation arose wherein the graduates from these educational institutions were not effectively absorbed within the labor force. This not only resulted in an increase in graduate unemployment levels but also resulted in an increase in social conflict within both of these two states. As a result of this such a form of

developmental model adopted by both India and China has resulted in an absence of sustainable development.

The third hypothesis formulated by me was:

H₃: *If a state initiates a new strategic thrust based on its long term national goals then the state will formulate a new educational policy which will result in the creation of a labor force that is utilized effectively within the economy of that state and hence will not only meet the manpower requirements of multinational corporations but also will bring about sustainable economic development of the state.*

The primary reason for the formulation of the third hypothesis was my expectation that the case of India and China were completely different from each other. I was of the opinion that since China is a closed society and has a socialist form of government it would be less susceptible to the influences of multinational corporations and the vagaries of the forces of globalization. However, my study goes on to suggest that the forces of globalization are able to severely impact the economy of a state, inspite of the regime type that might be in existence. Thus, based on the study of India and China I observed that although the governments of both of these two states did attempt to formulate a long term goals with respect to higher educational policies, but the forces of globalization i.e. Multinational Corporations hijacked their agenda resulting in the absence of sustainable development within these two states. Hence, I had to reject the third and final hypothesis.

7.3 Theoretical Implications

The theoretical implications of this study are extremely significant and profound. This dissertation helps fill in a major gap within the sustainable development literature as well as the

development literature. The literature on development recognizes that multinational corporations through the mode of foreign direct investment play a very important role in the economic development of a state. The globalization literature also supports this viewpoint and discusses the role of multinational and trans-national corporations in intensifying the process of globalization as well as in encouraging the movement of capital from developed countries to developing countries due to emerging market opportunities. In addition if we study the literature on impact of foreign direct investment on a country's economic development, we observe that the literature is unanimous in its agreement that FDI has a positive impact on a country's economic development.

Furthermore, the literature on why FDI inflows take place into a country has identified the presence of a qualified human capital as an important variable that helps attract FDI inflow into a country. Although, there does exist some literature which discusses the role of education in developing human capital but this literature is few and far in-between. Thus a comprehensive survey of the literature goes on to show that there is an absence of any literature which discusses the impact of FDI inflow on the educational policy of a developing country and how a new educational policy that develops in reaction to such an FDI inflow affects sustainable development in that country. Therefore in this dissertation I helped further the development literature by bridging the gap that exists between the literature which discuss the role of FDI in bringing about economic development and the literature that discusses the role of human capital and education in promoting sustainable development. I also made an addition to the sustainable development literature by highlighting that, not only are the concepts of education policies and human capital development interlinked; but also that sustainable development cannot take place until States take steps to ensure that their human capital formation is a result of the broader

strategic goals that the nation might have had set for itself rather than by reacting to the short terms pulls and demands on their economies by forces of globalization.

7.4 Policy Implications

The dissertation topic is also extremely relevant from a policy point of view. An increase in the understanding of the linkage between foreign direct investment and the formulation of educational policies in developing countries; will play a significant role in ensuring that the developing countries are able to effectively meet the challenge posed by globalization and promote sustainable development by structuring their educational policies so that they are in tune with the broader strategic view that the nation has of itself within the global community.

Although, the influence of MNC's and educational policies in the developed parts of the world are not profound on the economic development of these states; but in the developing parts of the world these effects are not only profound but have the potential of adversely impacting the social, political and economic lives of the state and the societies.

7.5 Limitations and Suggestion for Future Study

Although, I have taken numerous steps to ensure that the study is as robust as possible however the study has certain limitations. First of all the in the study I only evaluate two cases. Although the factors why I chose to conduct a two case study have been enumerated by me in the earlier chapters, however a two case study does not give us a good idea of how MNC's and FDI have been impacting the development of higher educational policies in developing country on a larger scale. Therefore there exists a lot of scope regarding extending this study. The study can be covered to study states in Africa and Latin America. Such an expansion of the breadth of the study will enable me to understand how FDI and MNC's have impacted human capital

development and educational policies in regions other than Asia. This will further help me strengthen my argument.

Secondly in the study I have not discussed the social impact of the impact of FDI and MNC's on the educational policies of a state. This discussion can be further extended to understand how the societies in both these countries have been impacted. Such a study can enable us to understand the negative causes of globalization and can serve as guidance to other developing countries on the steps that can be taken by them to reduce the negative influences of globalization and its numerous agents on their societies. This study should also be extended further to consider how states and societies in other parts of the world have been impacted by MNC's exercising their influence on higher educational policies.

Finally another limitation of the study was my inability to get data on graduate unemployment levels in China. This is primarily because the majority of such a data is in mandarin and hence due to language restrictions I have been unable to develop this data. Such a data is important because it can be then used in the case study as well as regression analysis to show how with an increase in educational institutions and graduation rates; there has also been a corresponding increase in unemployment levels among graduates. Thus, in the future I plan to employ the services of Chinese speaking individuals who can data mine this information for me and enable me to further strengthen my conclusions in my dissertation.

7.6 Conclusion

Thus, based on the above mentioned analysis it can be observed that four of my hypothesis hold true. In this dissertation I have not only added to the developmental literature and the sustainable development literature; but also have suggested recommendations which have made this dissertation both academically relevant and policy oriented. In my dissertation I have shown that

Multinational Corporations enter into the economy of a developing country through the mode of foreign direct investment and end up having a significant influence on human capital development; by influencing the educational policies of these developing states.

Using both qualitative and quantitative methodology I analyzed the cases of India and China and observed that inspite of differences in culture, languages and regime types forces of globalization and its agents; i.e. MNC's ended up significantly impacting the educational policies of these two countries and subsequently the process of human capital development. This has resulted in an un-sustainable economic development within these states primarily because; these countries possess surplus human capital that has not been optimally utilized within the labor force. Such a scenario has resulted in growth of social tensions and social conflict within these societies as well as has widened the gap between the rich and poor as a consequence of educational disparity. Although the study does have some limitations but these limitations can be easily addressed by widening the scope of this study and extending this study beyond it regional focus.

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Tables

Table 3.1: Economic Globalization Index for China and India (1970 – 2006)

Economic Globalization Index					
Year	India	China	Year	India	China
1970	16.44	17.49	1989	17.36	33.61
1971	16.44	17.49	1990	17.87	35.02
1972	16.44	17.49	1991	22.59	36.40
1973	16.44	17.49	1992	23.60	40.82
1974	16.44	17.49	1993	23.60	43.27
1975	16.53	17.49	1994	24.48	46.00
1976	16.43	21.99	1995	27.29	47.20
1977	16.43	21.99	1996	28.09	47.23
1978	16.43	22.21	1997	29.72	46.87
1979	16.33	22.67	1998	30.20	47.74
1980	16.42	22.76	1999	29.97	46.19
1981	16.33	22.98	2000	32.80	46.95
1982	16.43	23.29	2001	35.54	52.56
1983	16.53	23.77	2002	36.65	54.64
1984	16.74	24.88	2003	37.53	54.23
1985	16.84	27.04	2004	39.40	57.47
1986	16.75	29.80	2005	43.68	60.33
1987	16.84	31.70	2006	44.84	60.47
1988	17.05	33.47			

Source: Dreher, Axel, (2006) *Does Globalization Affect Growth? Empirical Evidence from a new Index*, Applied Economics 38, 10: 1091-1110. (KOF Globalization Index)

Table 3.2: Overall Globalization Index for China and India (1970 – 2006)

Overall Globalization Index					
Year	India	China	Year	India	China
1970	23.82	15.67	1989	28.37	27.64
1971	24.09	16.47	1990	28.52	34.76
1972	24.22	17.37	1991	30.90	36.64
1973	24.37	18.08	1992	32.63	38.89
1974	24.60	18.38	1993	33.48	40.55
1975	24.79	18.57	1994	34.51	41.94
1976	25.06	20.54	1995	37.05	43.94
1977	25.15	20.73	1996	40.77	44.86
1978	25.31	20.88	1997	42.04	46.05
1979	25.21	21.24	1998	42.54	49.65
1980	25.29	21.39	1999	43.28	50.44
1981	25.70	21.66	2000	45.19	51.27
1982	25.73	22.03	2001	46.26	54.04
1983	26.05	22.54	2002	47.03	55.02
1984	25.63	23.37	2003	47.26	55.46
1985	25.69	24.58	2004	48.09	57.59
1986	25.77	26.02	2005	49.73	59.13
1987	25.52	26.83	2006	51.36	59.85
1988	29.07	27.71			

Source: Dreher, Axel, (2006) *Does Globalization Affect Growth? Empirical Evidence from a new Index*, Applied Economics 38, 10: 1091-1110. (KOF Globalization Index)

Table 3.3: Gross Domestic Product Growth Rate and Per Capita GDP of China (1978 – 2006)

Year	GDP Growth Rates (%)	Per Capita GDP (Yuan)	Year	GDP Growth Rates (%)	Per Capita GDP (Yuan)
1978	11.7	381.23	1993	13.5	2,998.36
1979	7.6	419.25	1994	12.6	4,044.00
1980	7.8	463.25	1995	10.5	5,045.73
1981	5.2	492.16	1996	9.6	5,845.89
1982	9.1	527.78	1997	8.8	6,420.18
1983	10.9	582.68	1998	7.8	6,796.03
1984	15.2	695.20	1999	7.1	7,158.50
1985	13.5	857.82	2000	8	7,857.68
1986	8.8	963.19	2001	8.3	8,621.71
1987	11.6	1,112.38	2002	9.1	9,398.05
1988	11.3	1,365.51	2003	10	10,541.97
1989	4.1	1,519.00	2004	10.1	12,335.58
1990	3.8	1,644.00	2005	9.9	14,103.33
1991	9.2	1,892.76	2006	11.1	16,084.00
1992	14.2	2,311.09	2007	11.4	

Source: National Bureau of Statistics, China Statistical Yearbook 2007

Table 3.4: FDI in China (1979 – 2006)

US Dollars at current prices in millions

Year	Flow	Stock	Year	Flow	Stock
1979	0.08	..	1993	27,514.95	63,579.42
1980	57.00	1,074.00	1994	33,766.50	74,151.00
1981	265.00	1,339.00	1995	37,520.53	101,098.00
1982	430.00	1,769.00	1996	41,725.52	128,069.00
1983	916.00	2,685.00	1997	45,257.04	153,995.00
1984	1,419.00	4,104.00	1998	45,462.75	175,156.00
1985	1,956.00	6,060.00	1999	40,318.71	186,189.00
1986	2,243.73	8,303.73	2000	40,714.81	193,348.00
1987	2,313.53	10,617.26	2001	46,877.59	203,142.00
1988	3,193.68	13,810.94	2002	52,742.86	216,503.00
1989	3,392.57	17,203.51	2003	53,505.00	228,371.00
1990	3,487.11	20,690.62	2004	60,630.00	245,467.00
1991	4,366.34	25,056.96	2005	72,406.00	272,094.00
1992	11,007.51	36,064.47	2006	69,468.00	292,559.00

Source: UNCTAD Foreign Direct Investment Statistics

Table 3.5: Value of Mergers and Acquisitions in China by MNC;s (1987-2007)

Year	Millions of USD	Year	Millions of USD
1987	37	1998	4,634
1988	4	1999	8,090
1989	36	2000	38,677
1990	-	2001	3,868
1991	21	2002	17,506
1992	408	2003	7,274
1993	1,879	2004	1,678
1994	794	2005	11,590
1995	1,148	2006	12,128
1996	3,051	2007	15,537
1997	3,867		

Source: UNCTAD cross-border M&A database(www.unctad.org/fdistatistics).

Table 3.6: FDI in China for 2005 and 2006 (By Country and Region)

Regions	In USD Millions		
	Net Overseas FDI in 2005	Net Overseas FDI in 2006	Accumulated Net FDI by Year End of 2006
Asia	4,374.64	7,663.24	47,978.05
West	7,494.85	11,456.88	24,490.69
Africa	391.68	519.85	2,556.82
Europe	505.02	597.73	2,269.82
Latin America	6,466.16	10,474.74	19,694.37
North America	320.84	258.05	1,587.02
Oceania	202.83	126.36	939.48

Source: National Bureau of Statistics, China Statistical Yearbook 2007

Table 3.7: Gross Domestic Product Growth Rate of India (1980 – 2007)

Year	GDP Growth Rates (%)	Year	GDP Growth Rates (%)
1980	3.6	1994	6.8
1981	6.4	1995	7.6
1982	4.3	1996	7.5
1983	6.2	1997	4.9
1984	4.8	1998	5.9
1985	5.3	1999	6.9
1986	5	2000	5.4
1987	4.4	2001	3.9
1988	8.5	2002	4.5
1989	7.2	2003	6.9
1990	5.6	2004	7.9
1991	2.1	2005	9
1992	4.2	2006	9.7
1993	5	2007	8.9

Source: Planning Commission Government of India, IMF Statistics and CIA World Fact Book.

Table 3.8: FDI in India (1980 – 2006)

US Dollars at current prices in millions

Year	Flow	Stock	Year	Flow	Stock
1980	79.16	451.75	1994	974	3489.81
1981	91.92	543.67	1995	2151	5640.81
1982	72.08	615.75	1996	2525	8165.81
1983	5.64	621.39	1997	3619	10630
1984	19.24	640.63	1998	2633	14065
1985	106.09	746.72	1999	2168	15426
1986	117.73	864.45	2000	3585	17517
1987	212.32	1076.77	2001	5472	20326
1988	91.25	1168.02	2002	5627	25408
1989	252.1	1420.12	2003	4323	30827
1990	236.69	1656.81	2004	5771	38676
1991	75	1731.81	2005	6676	44019
1992	252	1983.81	2006	16881	50680
1993	532	2515.81			

Source:UNCTAD Foreign Direct Investment Statistics

Table 3.9: Value of Mergers and Acquisitions in India by MNC's (1987-2007)

Year	Millions of USD	Year	Millions of USD
1987	49	1998	949
1988	-	1999	1 381
1989	-	2000	1 904
1990	5	2001	1 661
1991	-	2002	1 888
1992	35	2003	1 407
1993	95	2004	1 927
1994	424	2005	7 144
1995	261	2006	7 119
1996	230	2007	18 830
1997	1 597		

Source: UNCTAD cross-border M&A database(www.unctad.org/fdistatistics).

Table 4.1: Summary Statistics for India (N = 30)

Variable	Min	Max	Mean	Std.Dev.
YEAR	1978	2007	1992	8.8034
EDUINST	0	18326	6278.27	5650.38
FDI	0	16881	2153.83	3494.20
GDP	594510	3156219	1422645	722491.7
PGDP	895	3800	1674.5	791.36
GDPGR	0	10	5.67	2.4259

Table 4.2: Summary Statistics for China (N = 29)

Variable	Min	Max	Mean	Std.Dev.
YEAR	1978	2006	1992	8.5147
EDUINST	598	1867	1085.03	321.20
FDI	0	72406	24240.07	24772.36
GDP	3645	210871	57055	59925.29
PGDP	381	16084	4568.24	4568.24
GDPGR	4	15	9.76	2.8241

Table 4.3: Regression of Educational Institutions as Dependent variable and FDI, GDP, Per Capita GDP and GDP Growth rate as Independent Variables. (India)

Regression of impact of FDI and Economic Growth on Educational Institutions (EDUINST as DV)	
Variables	OLS Regression
Foreign Direct Investment (FDI)	0.99** (4.54)
Gross Domestic Product (GDP)	0.02** (3.7)
Per Capita GDP (PGDP)	-(12.42)** -(3.23)
GDP Growth rates (GDPGR)	-(215.21) ^t -(0.77)
Constant	3407.12** (2.08)
R ²	0.7787
Adjusted R ²	0.7433
Root MSE	2862.7
F Ratio	21.99
Observations	30
Entries in parentheses are T ratios.	
* Represents statistical significance at 90% level	
** Represents statistical significance at 95% level	
*** Represents statistical significance at 99% level	
t represents that the value is statistically not significant.	
Prob > F for the model is 0.00	

Table 4.4: Regression of Educational Institutions as Dependent variable and FDI, GDP, Per Capita GDP and GDP Growth rate as Independent Variables. (China)

Regression of impact of FDI and Economic Growth on Educational Institutions (EDUINST as DV)	
Variables	Cochrane-Orcutt Regression
Foreign Direct Investment (FDI)	0.00 ^t (0.75)
Gross Domestic Product (GDP)	0.07** (2.19)
Per Capita GDP (PGDP)	-(0.94)* -(2.06)
GDP Growth rates (GDPGR)	2.04 ^t (0.48)
Constant	1247.27** (6.49)
R ²	0.5904
Adjusted R ²	0.5192
Root MSE	57.87
F Ratio	8.29
Observations	28
Entries in parentheses are T ratios.	
* Represents statistical significance at 90% level	
** Represents statistical significance at 95% level	
*** Represents statistical significance at 99% level	
t represents that the value is statistically not significant.	
Prob > F for the model is 0.00	

Table 5.1: India's Foreign Exchange Reserves in US\$ Million between years 1991-2007

Foreign Exchange Reserves in US\$ Million					
Year	1991	1996	2001	2005	2007
Total	5,834	21,687	42,281	140,076	203,881

Sources: Handbook of Statistics on Indian Economy and Monthly Bulletin, Reserve Bank of India.

Table 5.2: India's Foreign Exchange Reserves as a percentage of GDP

Foreign Exchange Reserves as a percent of GDP							
Year	1971-1975	1976-1980	1981-1985	1986-1990	1991-1995	1996-2000	2001-2005
Percentage	1.6	4.5	2.8	2.1	4.8	7.5	13.6*

Source: International Financial Statistics, IMF.

*= Ending Period 2003

Table 5.3: Sector attracting Highest FDI Inflows in US\$ Million between years 2002 and 2006

SECTORS ATTRACTING HIGHEST FDI INFLOWS: Amount of FDI Inflows in US\$ Million							
Ranks	Sector	2002-03	2003-04	2004-05	2005-06	Cumulative Inflows (from August 1991 to Jan. 2006)	% age with FDI Inflows
1	Electrical Equipments	644	532	721	862	4,907	16.2
2	Transportation Industry	455	308	179	213	3,169	10.19
3	Services Sector	326	269	469	491	3,001	9.52
4	Telecommunications	223	116	129	202	2,894	9.38
5	Fuels (Power + Oil Refinery)	118	113	166	203	2,691	8.81
6	Chemicals (other than fertilizers)	129	20	198	431	2,127	6.56

Source: Fact Sheet on FDI from August 1991 January 2006. Department of Industrial Policy and Promotion. Ministry of Commerce and Industry. The Government of India. http://dipp.nic.in/fdi_statistics/india_fdi_index.htm

Table 5.4: Growth of professional higher education institutions in India between years 1999-2005

Growth of professional higher education institutions					
Name of Course	No of Institutions in 1999	No of Institutions in 2005	Private Share	Public Share	Percentage Increase
Engineering	669	1478	121	88	12
Pharmacy	204	629	208	94	6
Hotel Management	41	70	70	90	10
Architecture	78	118	51	67	33
Teacher Education	1050	5190	395	68	32
MCA	780	976	25	62	38
MBA	682	1052	55	64	36
Medicine	174	229	32	46	54
Physiotherapy	52	205	294	92	8
Total	3730	9947	167	78	22

Source: Reproduced from "Higher Education in India: A Need for Change". Working paper No. 180 by Pawan Agrawal. ICRIER. June 2006

Table 5.5: Engles Coefficient for China (Urban and Rural Households 1978-2006)

Year	Urban Households (%)	Rural Households (%)	Year	Urban Households (%)	Rural Households (%)
1978	57.5	67.7	1997	46.6	55.1
1980	56.9	61.8	1998	44.7	53.4
1985	53.3	57.8	1999	42.1	52.6
1990	54.2	58.8	2000	39.4	49.1
1991	53.8	57.6	2001	38.2	47.7
1992	53.0	57.6	2002	37.7	46.2
1993	50.3	58.1	2003	37.1	45.6
1994	50.0	58.9	2004	37.7	47.2
1995	50.1	58.6	2005	36.7	45.5
1996	48.8	56.3	2006	35.8	43.0

Source: National Bureau of Statistics of China. Table 10-2

Table 5.6: Number of Higher Educational Institutions in China with enrollment numbers, Graduates and Teachers. (1977 – 2006)

Year	No. of institutions	Number of New Student enrollment (10,000 Persons)	Total enrollments in Millions	Annual Increase/Decrease (10,000 Persons)	Number of Graduates from Higher Educational Institutions (10,000 Persons)
1977	404.00	-	0.63	-	-
1978	598.00	40.20	0.86	23.00	16.50
1979	633.00	-	1.04	18.00	-
1980	675.00	28.10	1.17	13.00	14.70
1981	704.00	-	1.30	13.00	-
1982	715.00	-	1.18	(12.00)	-
1983	805.00	-	1.31	13.00	-
1984	902.00	-	1.45	14.00	-
1985	1,016.00	61.90	1.70	25.30	31.60
1986	1,054.00	57.20	1.88	17.70	39.30
1987	1,063.00	61.70	1.96	7.90	53.20
1988	1,075.00	67.00	2.07	10.70	55.30
1989	1,075.00	59.70	2.08	1.60	57.60
1990	1,075.00	60.90	2.06	(1.90)	61.40
1991	1,075.00	62.00	2.04	(1.90)	61.40
1992	1,053.00	75.40	2.18	14.00	60.40
1993	1,065.00	92.40	2.54	35.20	57.10
1994	1,080.00	90.00	2.80	26.30	63.70
1995	1,054.00	92.60	2.91	10.70	80.50
1996	1,032.00	96.60	3.02	11.50	83.90
1997	1,020.00	100.00	3.17	15.30	82.90
1998	1,022.00	108.40	3.41	23.50	83.00
1999	1,071.00	159.70	4.13	72.50	84.76
2000	1,041.00	220.61	5.56	142.69	94.98
2001	1,225.00	268.28	7.19	162.98	103.63
2002	1,396.00	320.50	9.03	184.29	133.73
2003	1,552.00	382.20	11.09	205.24	187.70
2004	1,731.00	447.30	13.34	224.90	239.10
2005	1,792.00	504.46	15.62	228.28	306.80
2006	1,867.00	-	17.39	177.02	377.50

Sources: Ministry of Education and the State Education Commission (1984, 1991); The State Statistic Bureau (SSB) (1992-1996), National Bureau Of Statistics of the The Peoples Republic Of China

Table 6.1: Share of country wise FDI Inflows in India in US\$ Million between April 2000 and December 2008.

Amount in US\$ million

Rank s	Country	2005-06 (April-March)	2006-07 (April-March)	2007-08 (April-March)	2008-09 (April – Dec.08)	Cumulative Inflows (April '00 to Dec. '08)	%age to total Inflows (in terms of rupees)
1.	MAURITIUS	2,570	6,363	11,096	8,606	34,241	44 %
2.	SINGAPORE	275	578	3,073	2,101	6,458	8 %
3.	U.S.A.	502	856	1,089	1,335	5,868	8 %
4.	U.K.	266	1,878	1,176	780	5,142	7 %
5.	NETHERLANDS	76	644	695	819	3,524	5 %
6.	JAPAN	208	85	815	227	2,353	3 %
7.	GERMANY	303	120	514	568	2,112	3 %
8.	CYPRUS	70	58	834	1,018	2,003	3 %
9.	FRANCE	18	117	145	412	1,172	2 %
10.	U.A.E.	49	260	258	219	882	1 %
TOTAL FDI INFLOWS *		5,546	15,726	24,579	21,153	83,661	-

Source: Department of Industrial Policy and Promotion. Ministry of Commerce and Industry. The Government of India. http://dipp.nic.in/fdi_statistics/india_FDI_December2008.pdf

Table 6.2: Sector attracting Highest FDI Inflows in US\$ Million between years 1991 and 2001

SECTORS ATTRACTING HIGHEST FDI INFLOWS: Amount of FDI Inflows in US\$ Million							
Ranks	Sector	2002-03	2003-04	2004-05	2005-06	Cumulative Inflows (from August 1991 to Jan. 2006)	% age with FDI Inflows
1	Electrical Equipments	644	532	721	862	4, 907	16.2
2	Transportation Industry	455	308	179	213	3,169	10.19
3	Services Sector	326	269	469	491	3,001	9.52
4	Telecommunications	223	116	129	202	2,894	9.38
5	Fuels (Power + Oil Refinery)	118	113	166	203	2,691	8.81
6	Chemicals (other than fertilizers)	129	20	198	431	2,127	6.56

Source: Fact Sheet on FDI from August 1991 January 2006. Department of Industrial Policy and Promotion. Ministry of Commerce and Industry. The Government of India. http://dipp.nic.in/fdi_statistics/india_fdi_index.htm

Table 6.3: Sector attracting Highest FDI Inflows in US\$ Million between years 2000 and 2008

Amount in US\$ million

<i>Ranks</i>	<i>Sector</i>	<i>2005-06</i> <i>(April-March)</i>	<i>2006-07</i> <i>(April-March)</i>	<i>2007-08</i> <i>(April-March)</i>	<i>2008-09</i> <i>(April-Dec.)</i>	<i>Cumulative Inflows</i> <i>(April '00 to Dec. '08)</i>	<i>% age to total Inflows</i>
1.	SERVICES SECTOR (financial & non-financial)	543	4,664	6,615	3,960	17,018	22 %
2.	COMPUTER SOFTWARE & HARDWARE	1,375	2,614	1,410	1,554	8,832	11 %
3.	TELECOMMUNICATIONS (radio paging, cellular mobile, basic telephone services)	624	478	1,261	2,359	6,201	8 %
4.	CONSTRUCTION ACTIVITIES (including roads & highways)	151	985	1,743	1,787	4,950	6 %
5.	HOUSING & REAL ESTATE	38	467	2,179	1,985	4,697	6 %
6.	AUTOMOBILE INDUSTRY	43	276	675	790	3,026	4 %
7.	POWER	87	157	967	599	2,805	4 %
8.	METALLURGICAL INDUSTRIES	147	173	1,177	826	2,589	3 %
9.	PETROLEUM & NATURAL GAS	14	89	1,427	257	2,238	3 %
10.	CHEMICALS (other than fertilizers)	390	205	229	562	1,947	3 %

Source: Fact Sheet on FDI from August 1991-January 2006. Department of Industrial Policy and Promotion. Ministry of Commerce and Industry. The Government of India. http://dipp.nic.in/fdi_statistics/india_FDI_December2008.pdf

Table 6.4: Region Wise/State Break up for FDI Inflows received in India in US\$ Million between years 2000-2008

Statement on Region-Wise/State Break-UP for FDI Inflows Received. (from April 2000 to December 2008)			
Ranks	State covered	US\$ in Millions	%age with FDI Inflows
1	Maharashtra, Dadra and Nagar Haveli, Daman, Diu	26,676.5	33.7
2	Delhi, Parts of UP and Haryana	12,558.9	16.12
3	Karnataka	5,481.4	7.02
4	Gujarat	5,304.2	6.78
5	Tamil Nadu and Pondicherry	4,273.5	5.57
6	Andhra Pradesh	3,397.6	4.32
7	West Bengal, Sikkim, Andaman and Nicobar Islands	1,252.7	1.56
8	Rajasthan	425.6	0.59
9	Chandigarh, Punjab, Haryana, Himachal Pradesh	385.2	0.52

Source: Fact Sheet on FDI from April 2000 to December 2008. Department of Industrial Policy and Promotion. Ministry of Commerce and Industry. The Government of India.
http://dipp.nic.in/fdi_statistics/india_FDI_December2008.pdf

Table 6.5: Country Wise Foreign Technical Collaborations Approval in India (1991 – 2008)

Ranks	Country	No. of Technical Collaborations Approved	Percentage with Total tech. approvals
1	USA	1,812	22.58%
2	Germany	1,110	13.83%
3	Japan	874	10.89%
4	U.K.	868	10.81%
5	Italy	485	6.04%
6	Others	2,874	35.82%
Total of All Country		8,023	100%

Source: Fact Sheet on FDI from April 2000 to December 2008. Department of Industrial Policy and Promotion. Ministry of Commerce and Industry. The Government of India.
http://dipp.nic.in/fdi_statistics/india_FDI_December2008.pdf

Table 6.6: Sector-Wise Foreign Technical Collaborations Approval in India (1991 – 2008)

Ranks	Sector	No. of Technical Collaborations Approved	Percentage with Total tech. approvals
1	Electrical Equipments (Including Computer software and electronics)	1,252	15.67%
2	Chemicals (Other Than Fertilizers)	897	11.18%
3	Industrial Machinery	872	10.86%
4	Transportation Industry	752	9.37%
5	Misc. Mach. Engineering Industry	444	5.53%
6	Others	3,800	47.36%
Total of All Country		8,023	100%

Source: Fact Sheet on FDI from April 2000 to December 2008. Department of Industrial Policy and Promotion. Ministry of Commerce and Industry. The Government of India.
http://dipp.nic.in/fdi_statistics/india_FDI_December2008.pdf

Table 6.7: Growth of higher education institutions in India (1980-2005)

Year	Colleges for General education	Colleges for Professional Education	Deemed Universities	Total
1980	3,421	542	110	7,073
1985	4,067	1533	126	5,726
1990	4,862	886	184	5,932
1991	5,058	950	196	6,204
1992	5,334	989	207	6,530
1993	5,639	1,125	213	6,977
1994	6,089	1,230	219	7,538
1995	6,569	1,354	226	8,149
1996	6,759	1,770	228	8,757
1997	7,199	2,075	229	9,503
1998	7,494	2,113	237	9,844
1999	7,782	2,124	244	10,150
2000	7,929	2,223	254	10,406
2001	8,737	2,409	272	11,418
2002	9,166	2,610	304	12,080
2003	9,427	2,751	304	12,482
2004	10,377	3,201	343	13,921
2005	11,698	5,284	350	17,332

Source: The Ministry of Higher Education. The Government of India.

Table 6.8: Growth of professional higher education institutions in India between years 1999-2005

Growth of professional higher education institutions					
Name of Course	No of Institutions in 1999	No of Institutions in 2005	Percentage Increase	Private Share (03-04)	Public Share (03-04)
Engineering	669	1478	121	88	12
Pharmacy	204	629	208	94	6
Hotel Management	41	70	70	90	10
Architecture	78	118	51	67	33
Teacher Education	1050	5190	395	68	32
MCA	780	976	25	62	38
MBA	682	1052	55	64	36
Medicine	174	229	32	46	54
Physiotherapy	52	205	294	92	8
Total	3730	9947	167	78	22

Source: Reproduced from "Higher Education in India: A Need for Change". Working paper No. 180 by Pawan Agrawal. ICRIER. June 2006

Table 6.9:
Unemployment and Level of Education in India in 2006

Unemployment (UPS) and level of education (in per cent)						
Years of Education	Rate of Employment			Distribution of Employment		
	Male	Female	All	Male	Female	All
0	0.4	0.1	0.3	5.1	3.8	4.8
1 to 5	1.7	1.3	1.6	15.2	7.7	13.3
6 to 8	3.7	4.9	3.8	21.5	11.5	19
9 to 10	5.4	15.8	6.5	21.5	23.1	21.9
11 to 12	7.6	21.1	9.1	15.2	15.4	15.2
More than 12	8.5	27	11.3	21.5	38.5	25.8

Source: Reproduced from "Higher Education in India: A Need for Change". Working paper No. 180 by Pawan Agrawal. ICRIER. June 2006

Table 6.10: FDI in China between 1997 - 2006 (By Country and Region)

(\$ Million)

Year/Regions	Asia	West	Africa	Europe	Latin America	North America	Oceania
1997	34,276	10,109	82	4,439	1,981	3,688	586
1998	31,331	13,201	159	4,309	4,562	4,329	534
1999	26,832	12,618	196	4,797	3,204	4,616	509
2000	25,482	14,168	288	4,765	4,617	4,786	694
2001	29,613	15,890	330	4,484	6,309	5,097	1,015
2002	32,570	18,089	565	4,049	7,550	6,490	1,417
2003	34,102	16,340	618	4,272	6,907	5,161	1,731
2004	37,620	18,819	776	4,798	9,044	4,978	1,974
2005	4,375	7,292	392	505	6,466	321	203
2006	7,663	11,331	520	598	10,475	258	126

Source: National Bureau of Statistics, China Statistical Yearbooks 1996-2007

Table 6.11 FDI Inflow by Sector in China (1997-2006)

(\$ Million)

Sector/Years	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Leasing and Business Services	-	-	-	-	-	-	279	749	4,942	4,522
Mining	940	578	557	583	644	381	1,379	1,800	1,675	8,540
Wholesale and Retail Trades	1,402	1,181	965	858	1,398	1,664	357	800	2,260	1,114
Transport, Storage and Post	-	-	1,551	1,012	884	1,529	77	829	577	1,376
Manufacturing	28,120	25,582	22,603	25,844	48,847	59,270	624	756	2,280	907
Real Estate	5,169	6,410	5,588	4,658	5,031	7,217	-	9	116	384
Construction	1,438	2,064	917	905	1,823	1,058	23	48	82	33
Information Transmission, Computer Services and Software	-	-	-	-	-	-	9	31	15	48
Scientific Research, Technical Service and Geological Prospecting	-	-	-	-	654	31	6	18	129	282
Production and Supply of Electricity, Gas and Water	2,072	3,103	3,703	2,242	2,134	1,475	22	78	8	119

Source: National Bureau Of Statistics of the Peoples Republic Of China. China Statistical Yearbooks 1996-2007. Table 18-21

Figures

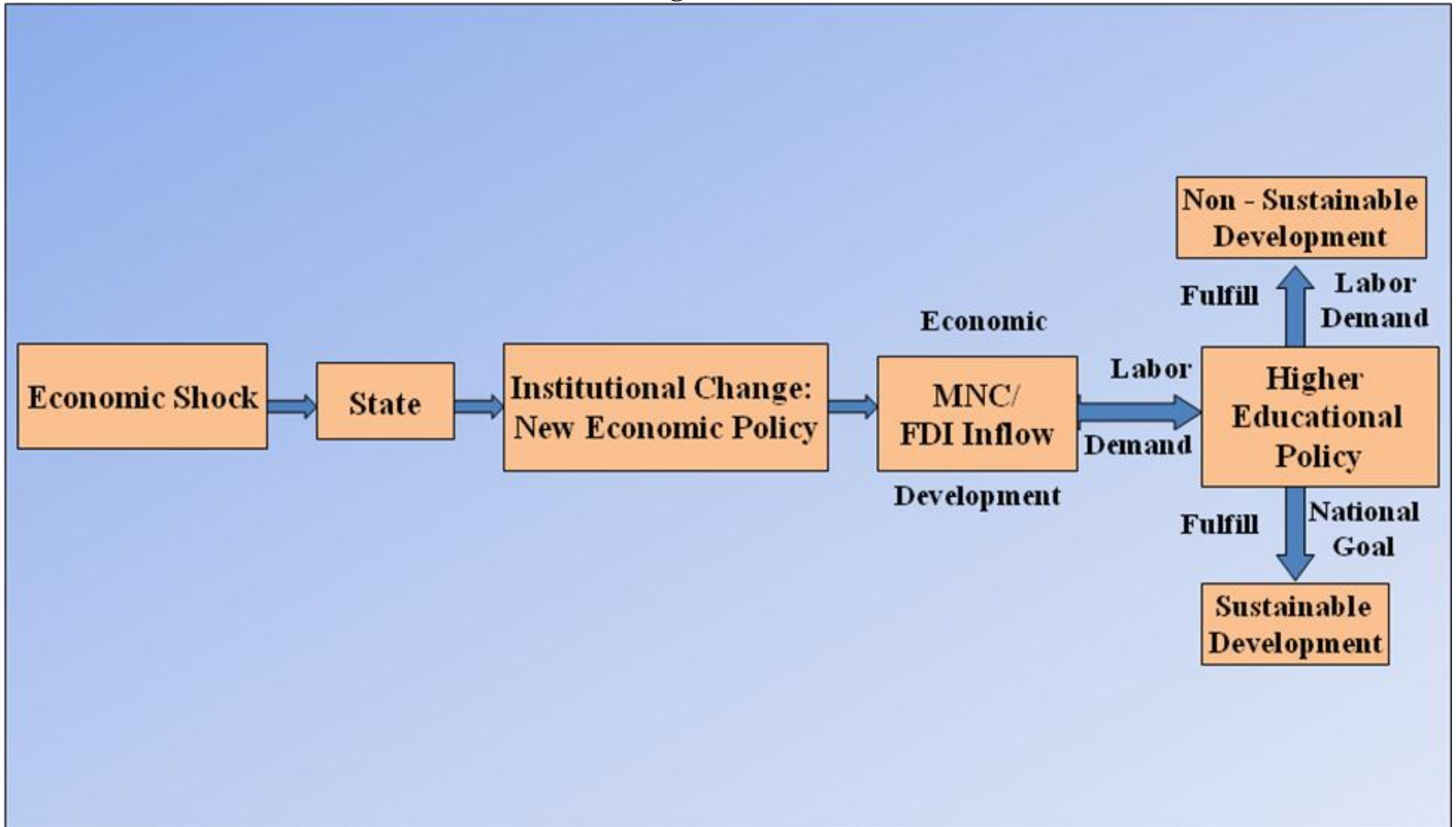


Figure 2.1: The Dissertation Model

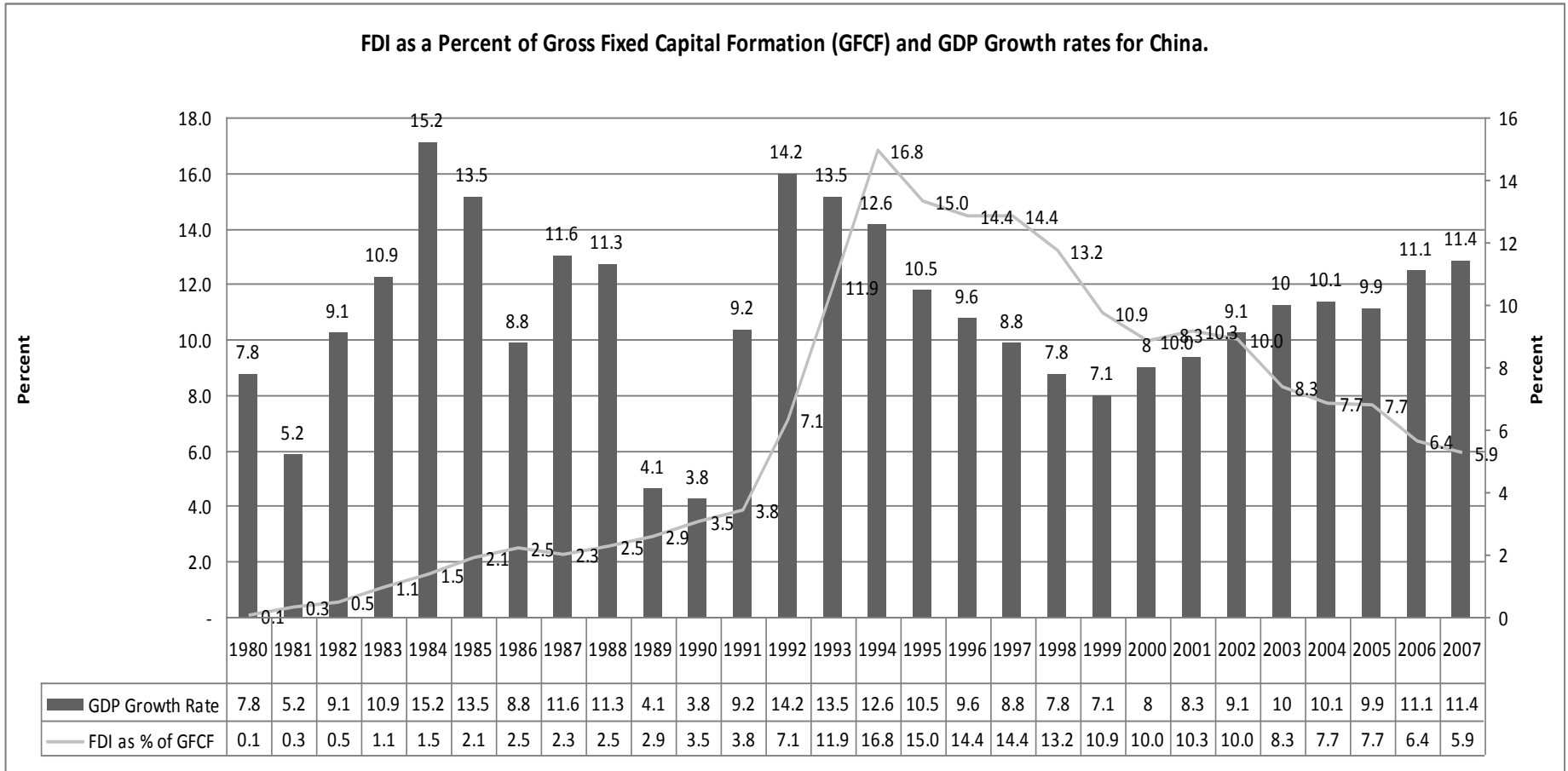


Figure 3.1: FDI as a Percent of Gross Fixed Capital Formation (GFCF) and GDP Growth rates for China.

Source: National Bureau of Statistics, China Statistical Yearbook 2007, UNCTAD Database and World Development Indicators Database of World Bank.

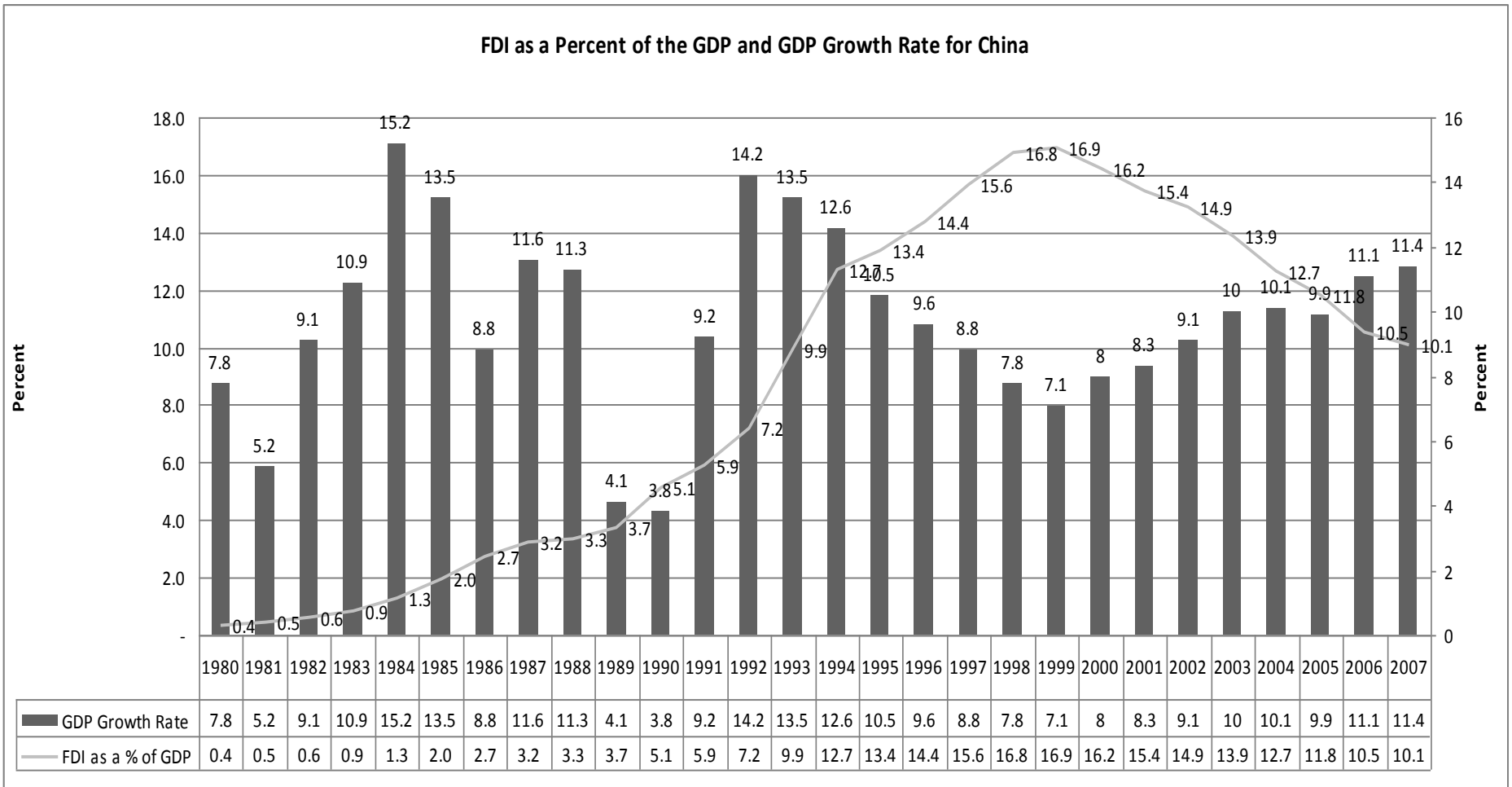


Figure 3.2: FDI as a Percent of the GDP and GDP Growth Rate for China

Source: National Bureau of Statistics, China Statistical Yearbook 2007, UNCTAD Database and World Development Indicators Database of World Bank.

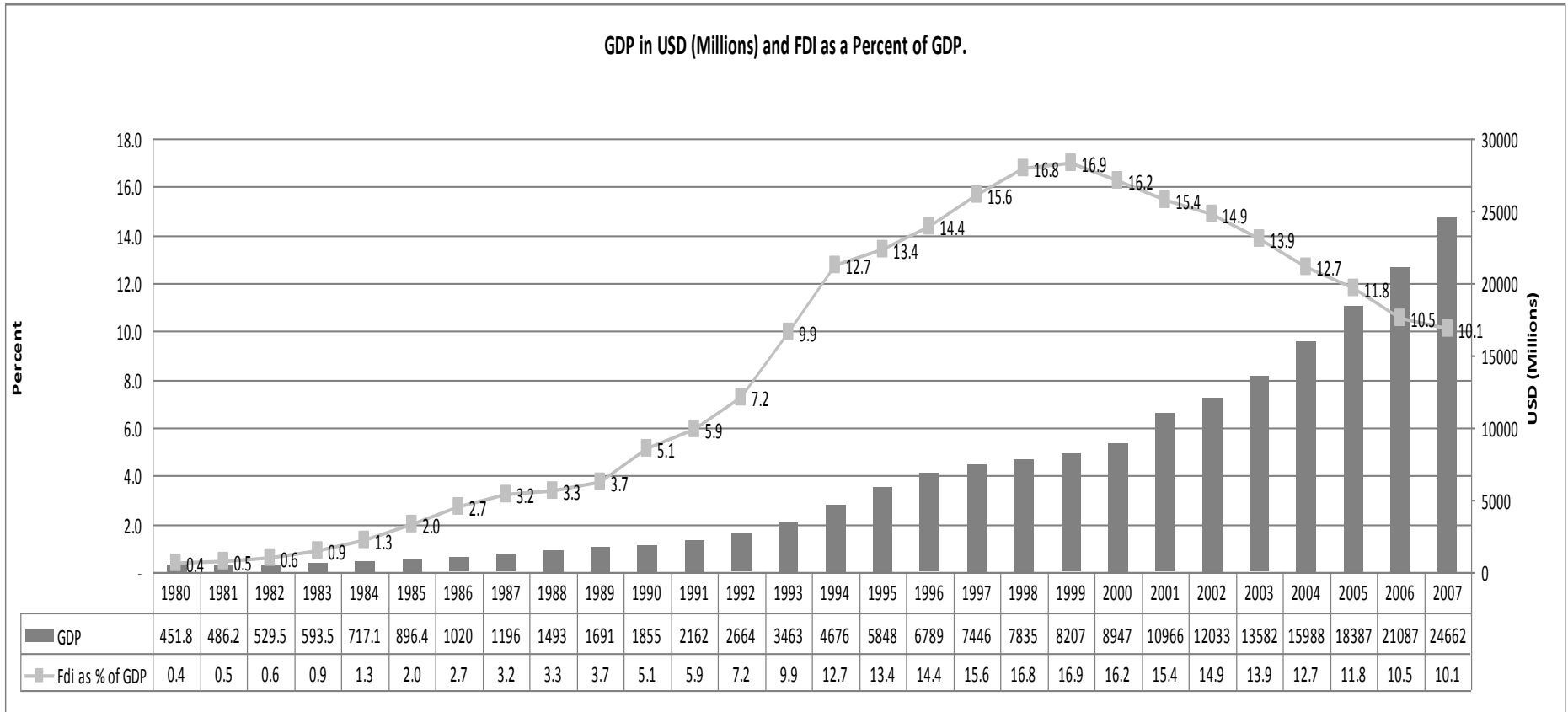


Figure 3.3: GDP in USD (Millions) and FDI as a Percent of GDP in China.

Source: National Bureau of Statistics, China Statistical Yearbook 2007, UNCTAD Database and World Development Indicators Database of World Bank.

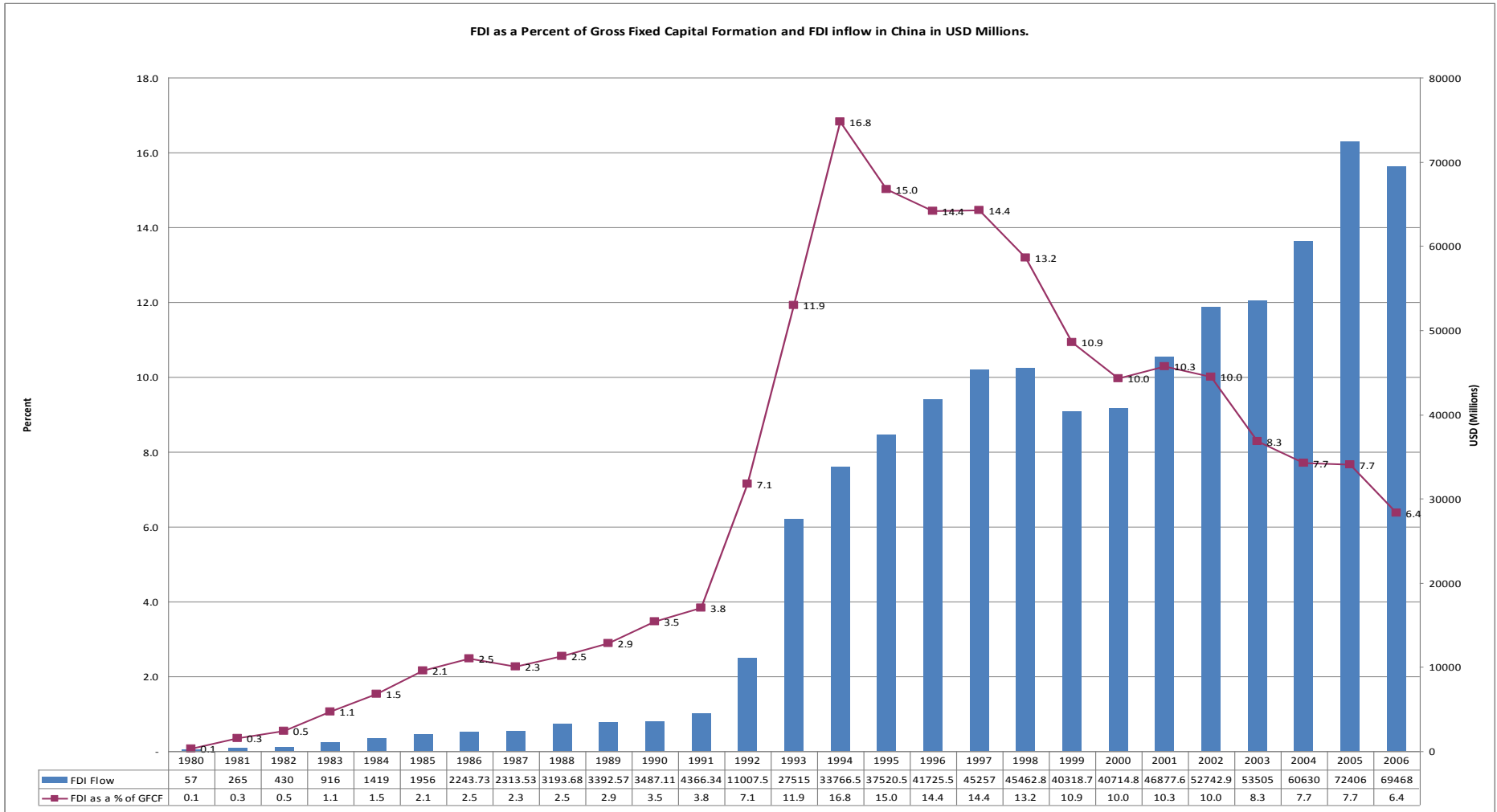


Figure 3.4: FDI as a Percent of Gross Fixed Capital Formation and FDI inflow in China in USD Millions.
 Source: National Bureau of Statistics, China Statistical Yearbook 2007, UNCTAD Database and World Development Indicators Database of World Bank.

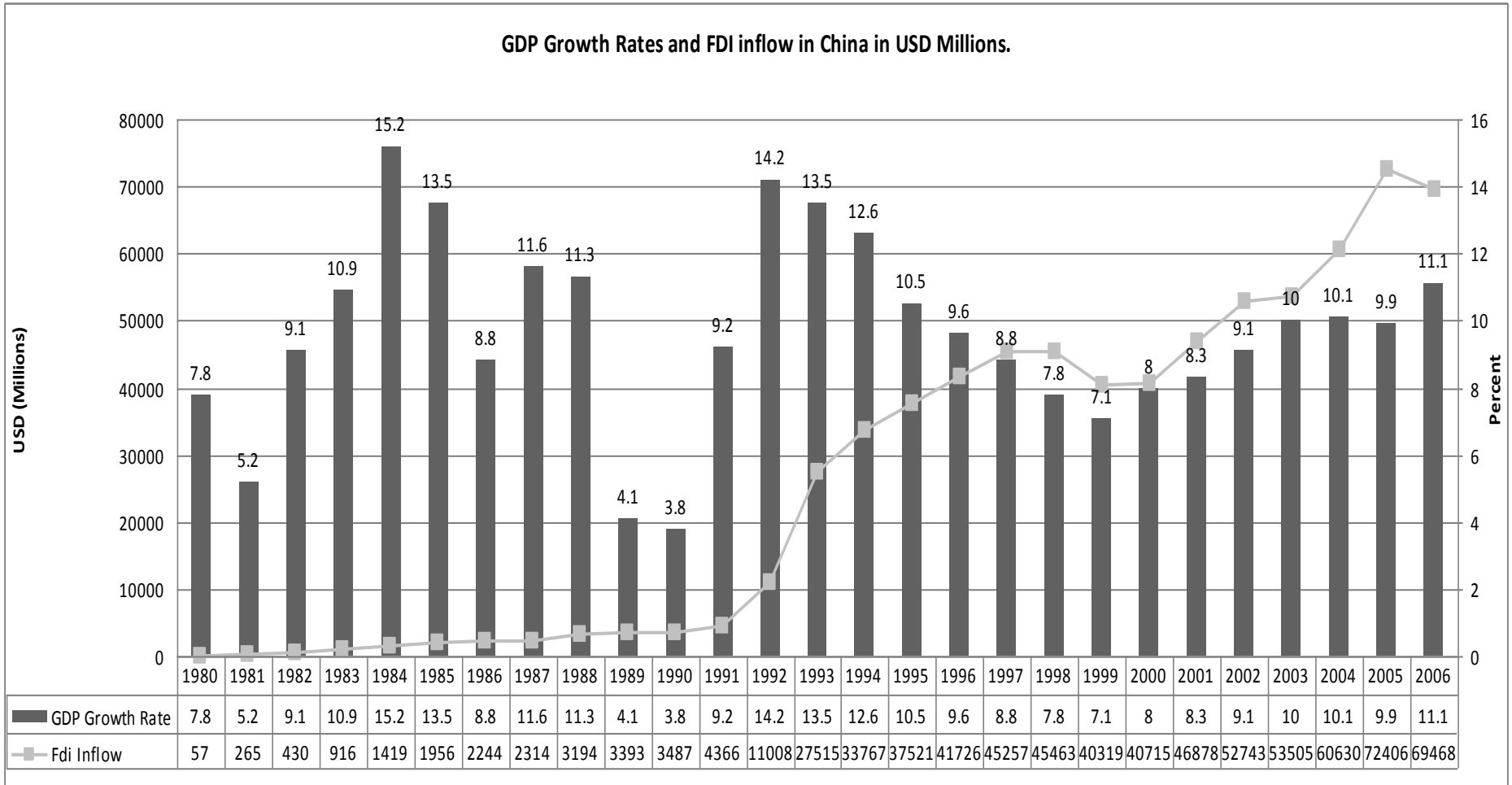


Figure 3.5: GDP Growth Rates and FDI inflow in China in USD Millions.

Source: National Bureau of Statistics, China Statistical Yearbook 2007, UNCTAD Database and World Development Indicators Database of World Bank.

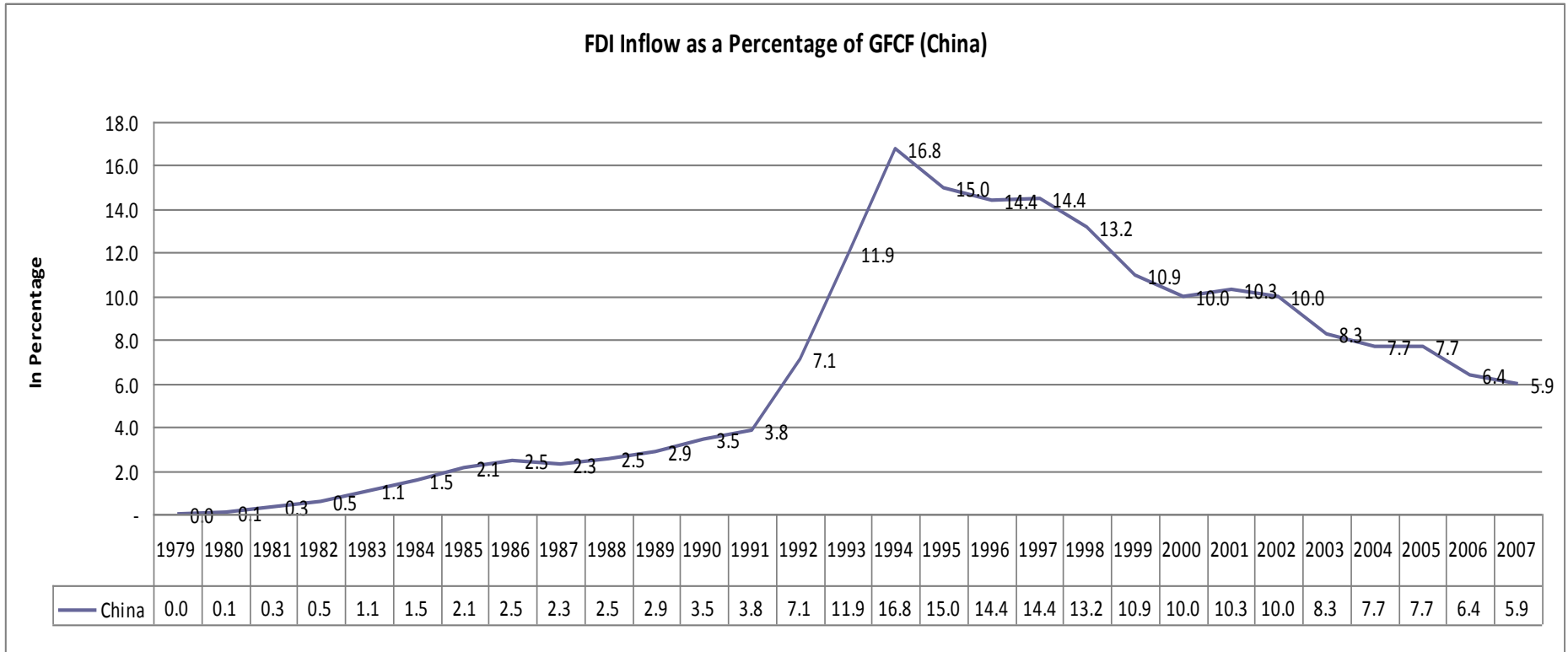


Figure 3.6: FDI Inflow as a Percentage of Gross Fixed Capital Formation for China.

Source: UNCTAD Database

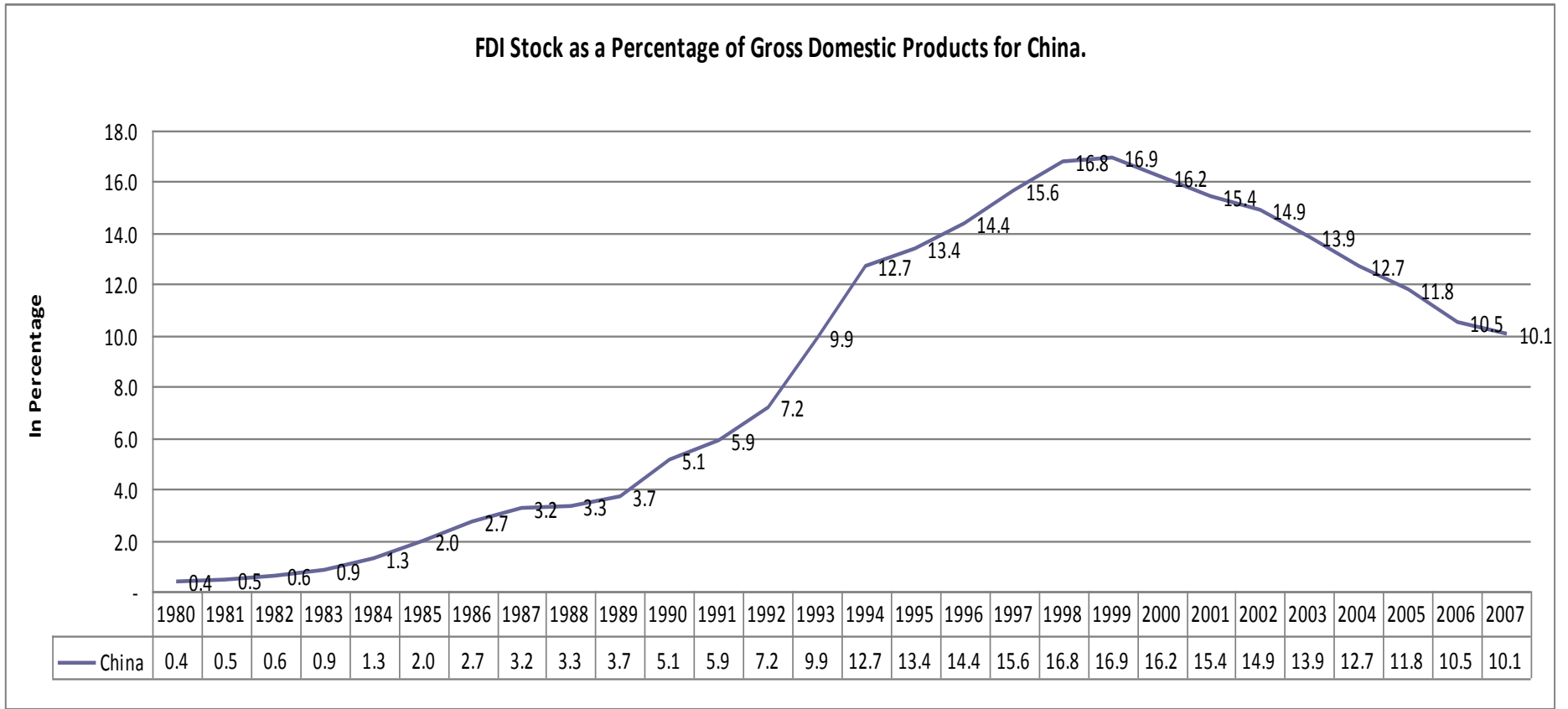


Figure 3.7: FDI Stock as a Percentage of Gross Domestic Products for China.

Source: UNCTAD Database.

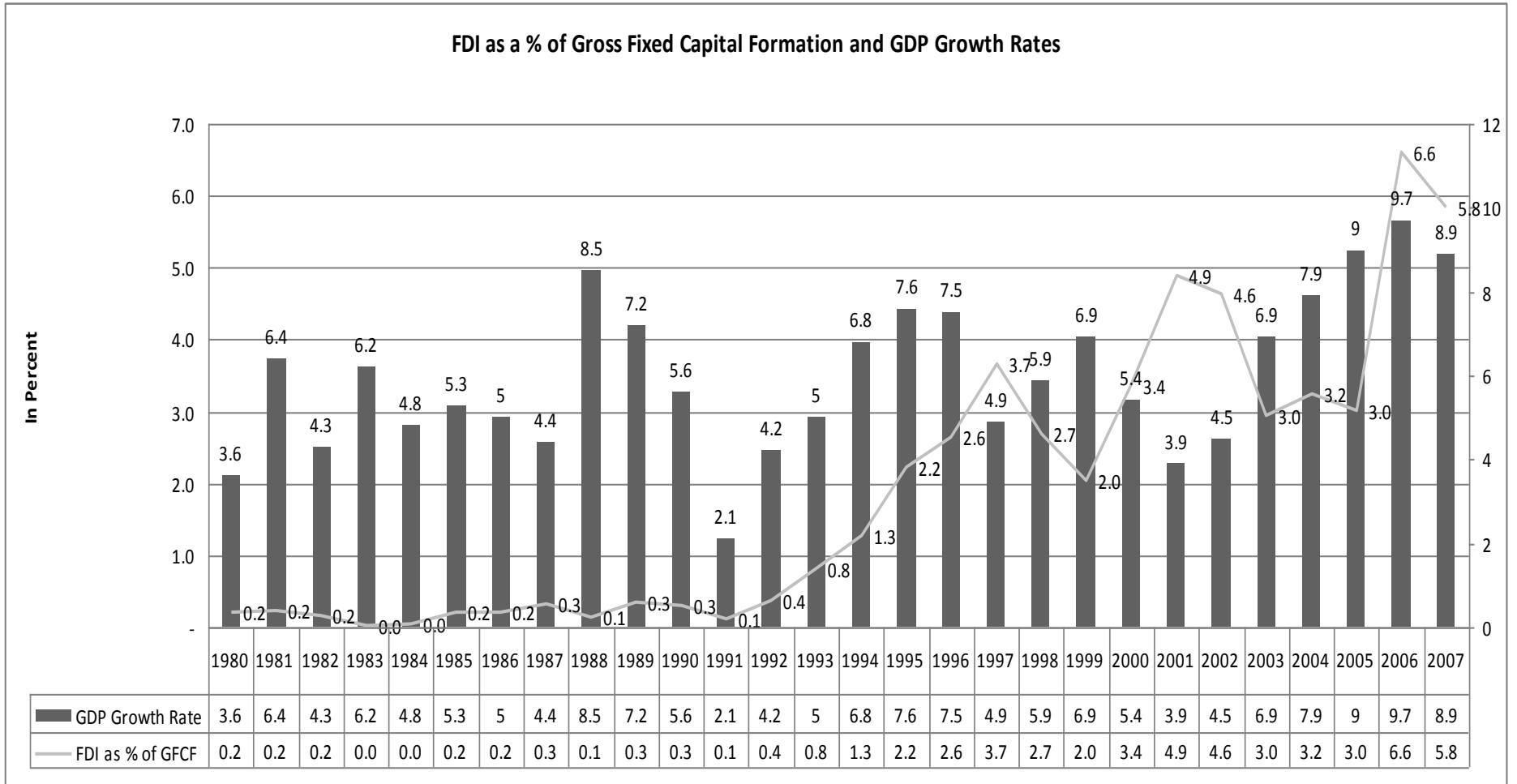


Figure 3.8: Foreign Direct Investment (FDI) as a Percent of Gross Fixed Capital Formation (GFCF) and GDP Growth rates for India

Source: UNCTAD Foreign Direct Investment Statistics, World Development Indicators Database of World Bank, Planning Commission Government of India, IMF Statistics and CIA World Fact Book.

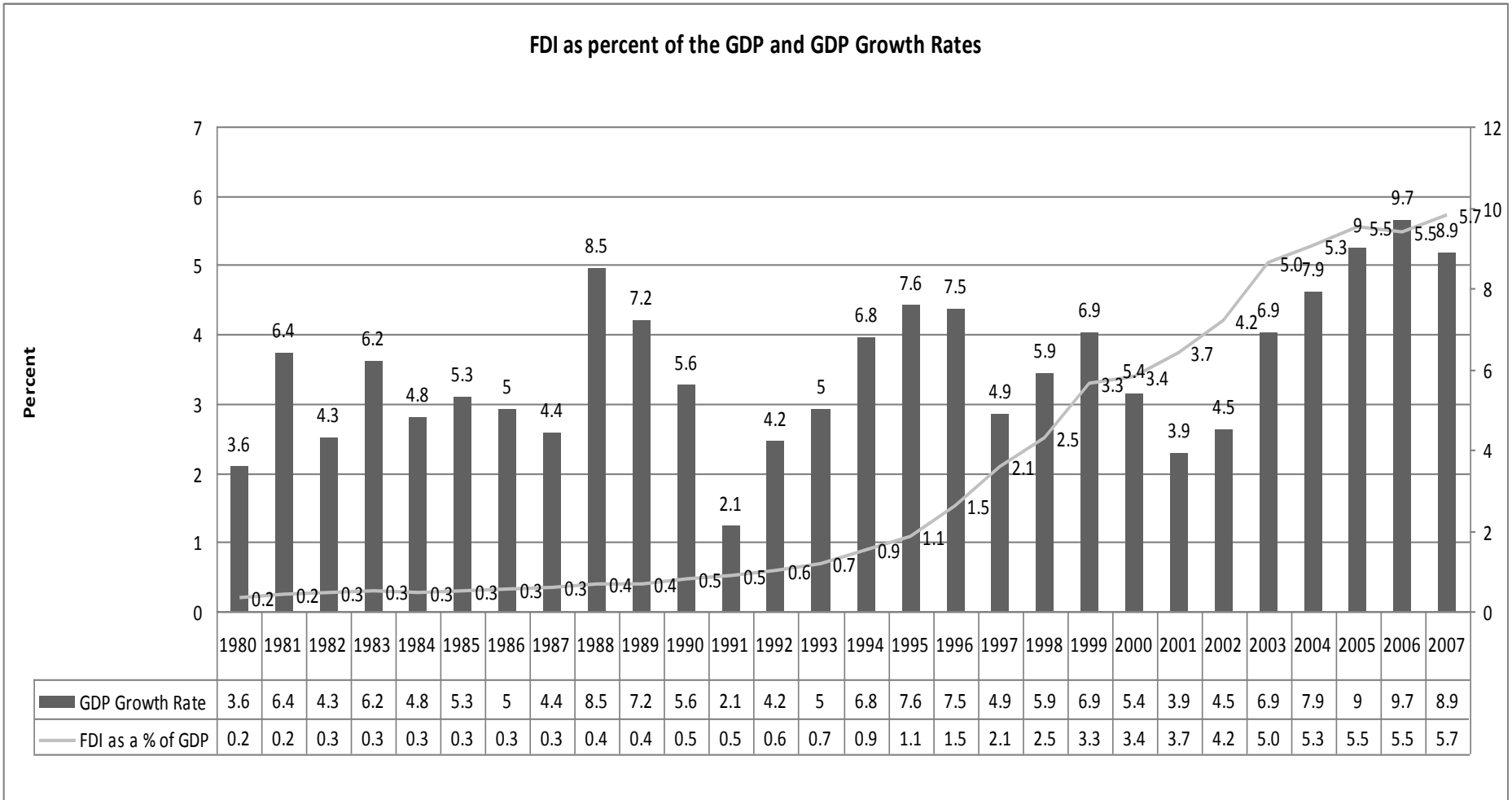


Figure 3.9: Foreign Direct Investment (FDI) as a Percent of the Gross Domestic Product (GDP) and GDP Growth Rates in India

Source: UNCTAD Foreign Direct Investment Statistics, World Development Indicators Database of World Bank, Planning Commission Government of India, IMF Statistics and CIA World Fact Book.

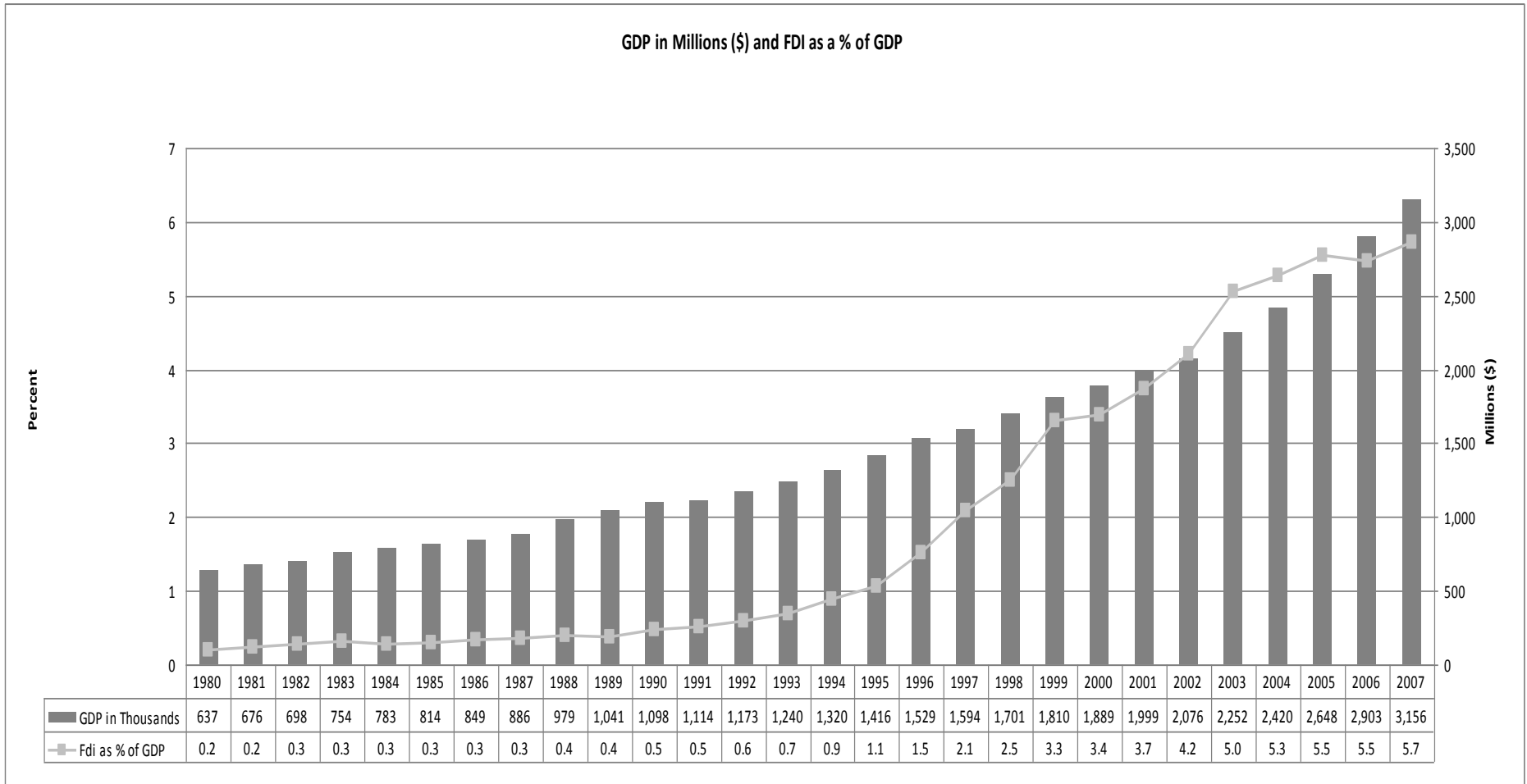


Figure 3.10: Gross Domestic Product in USD (Millions) and Foreign Direct Investment (FDI) as a Percent of GDP for India.

Source: UNCTAD Foreign Direct Investment Statistics, World Development Indicators Database of World Bank, Planning Commission Government of India, IMF Statistics and CIA World Fact Book.

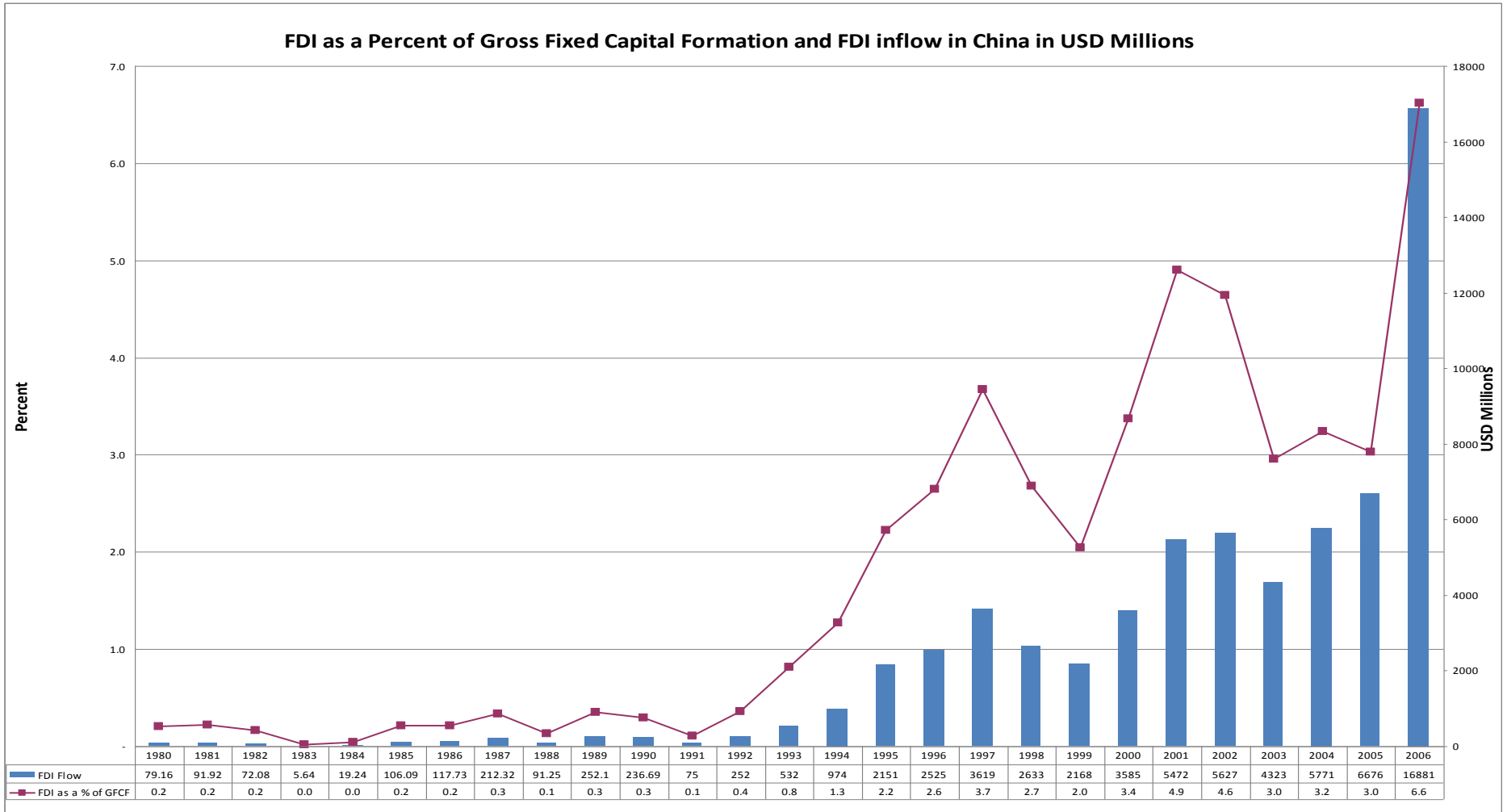


Figure 3.11: Foreign Direct Investment (FDI) as a Percent of Gross Fixed Capital Formation and FDI inflow in India in USD Millions. Source:UNCTAD Foreign Direct Investment Statistics, World Development Indicators Database of World Bank, Planning Commission Government of India, IMF Statistics and CIA World Fact Book.

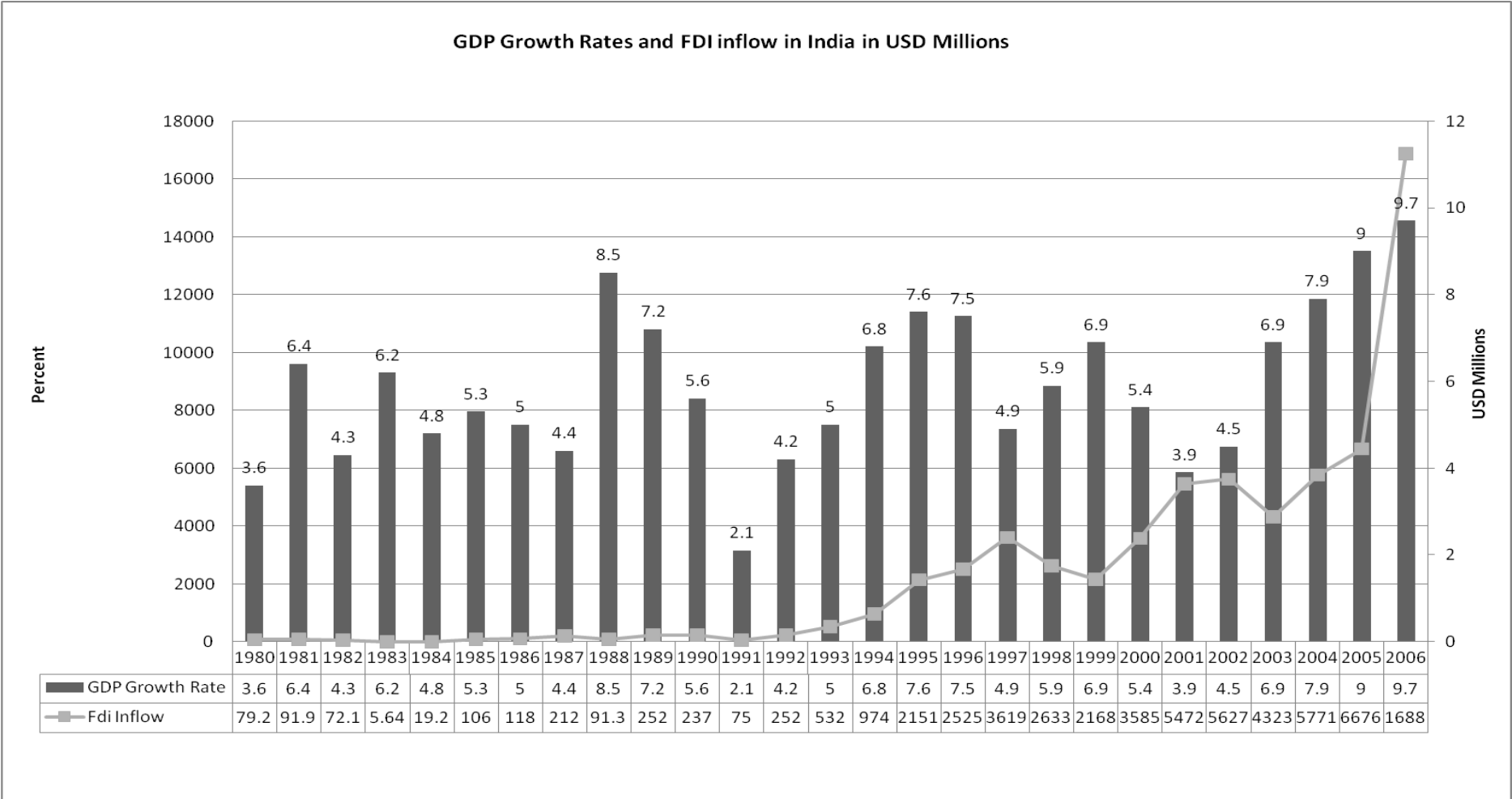


Figure 3.12: Gross Domestic Product (GDP) Growth Rates and FDI inflow in India in USD (Millions).

Source: UNCTAD Foreign Direct Investment Statistics, World Development Indicators Database of World Bank, Planning Commission Government of India, IMF Statistics and CIA World Fact Book.

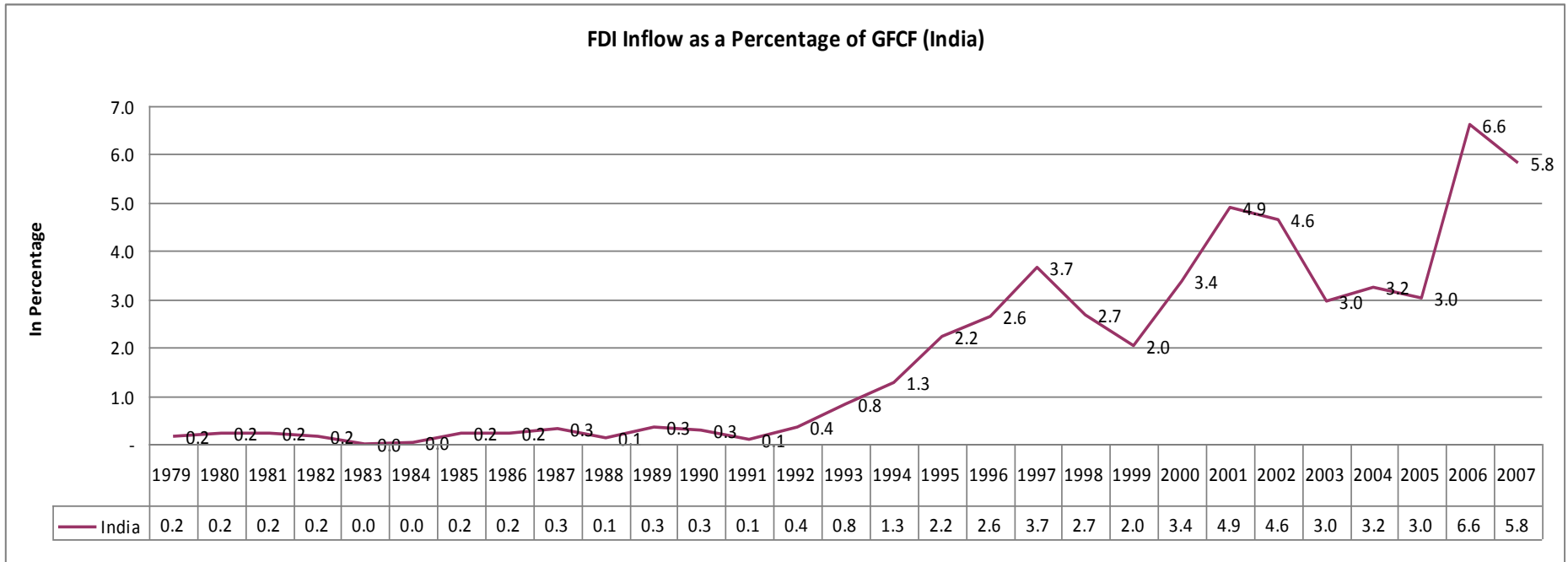


Figure 3.13: FDI Inflow as a Percentage of Gross Fixed Capital Formation for India.

Source: UNCTAD Database

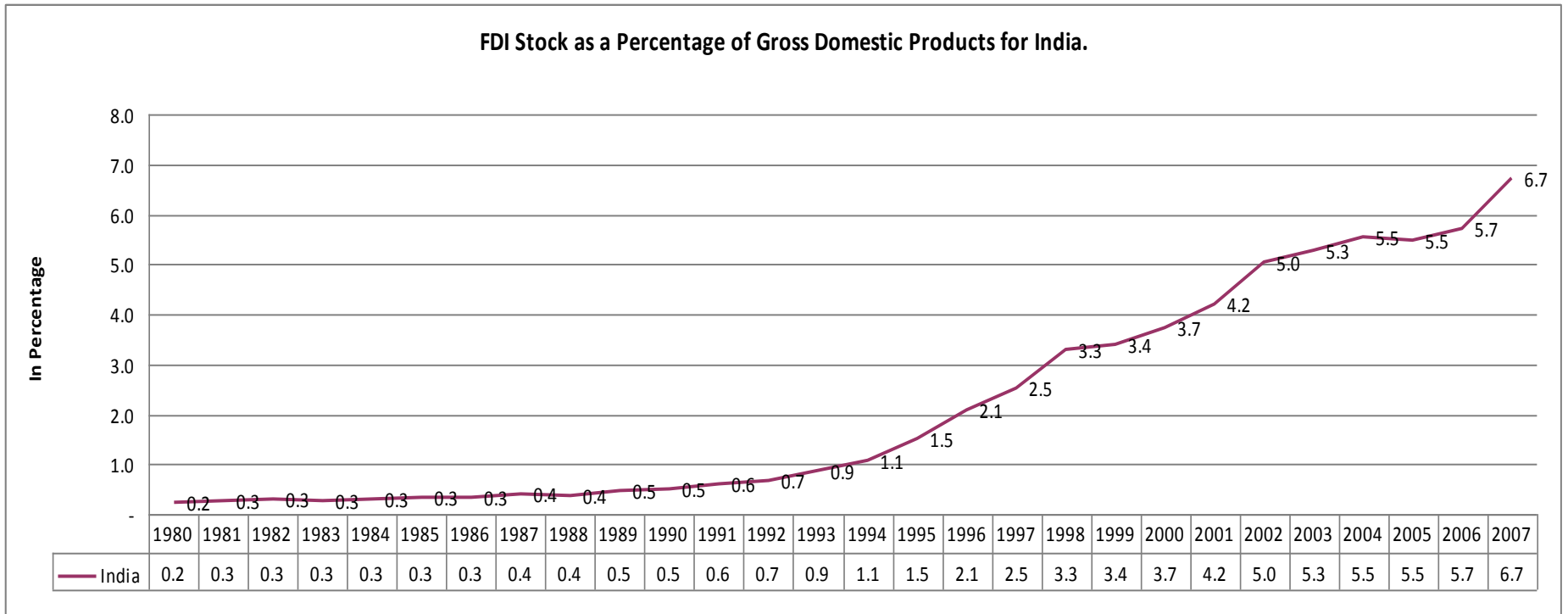


Figure 3.14: FDI Stock as a Percentage of Gross Domestic Products for India.

Source: UNCTAD Database

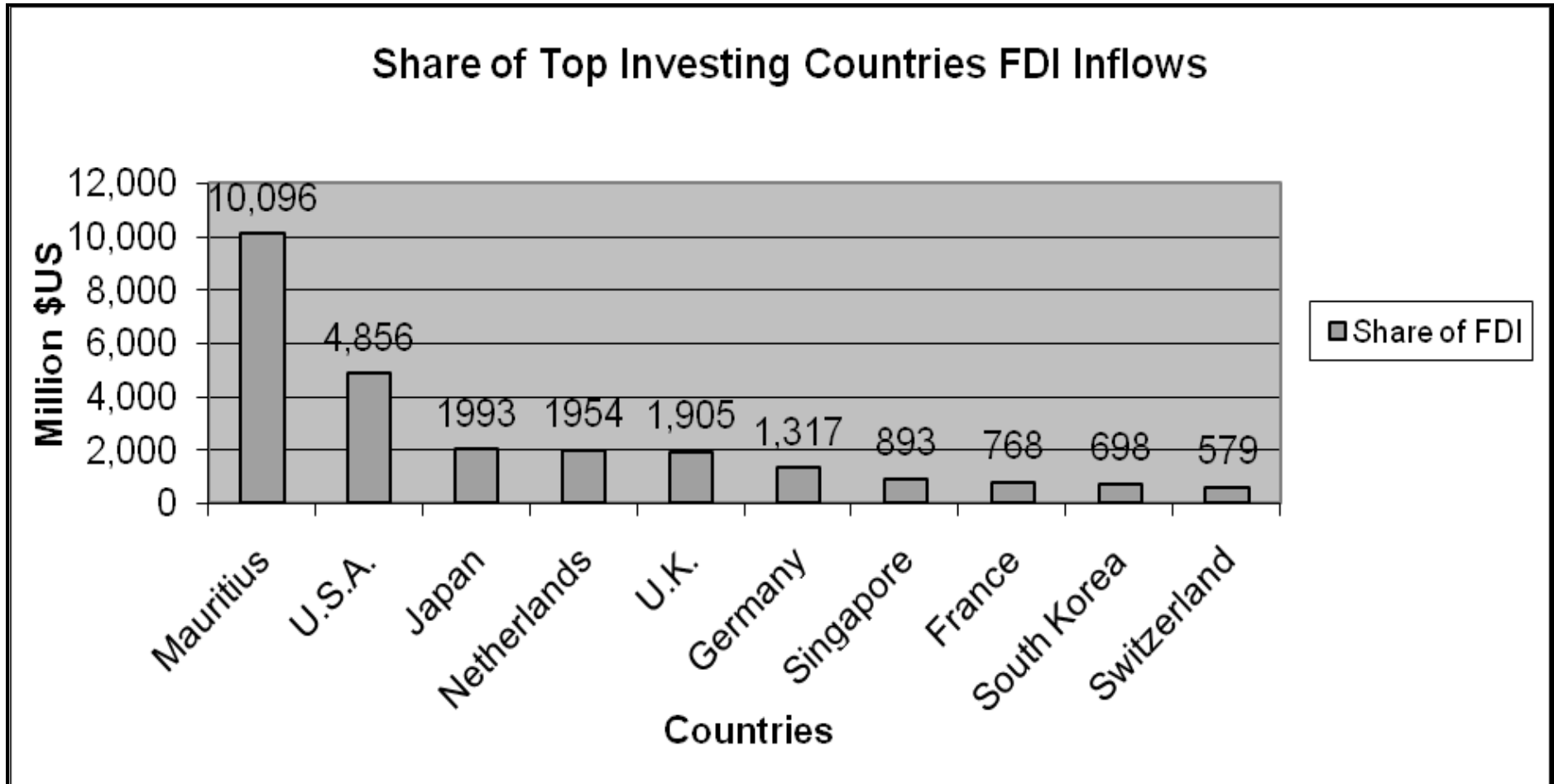


Figure 3.15: Share of country wise FDI Inflows in India in US\$ Million between August 1991 and September 2005

Source: Department of Industrial Policy and Promotion. Ministry of Commerce and Industry. The Government of India.
http://dipp.nic.in/fdi_statistics/india_fdi_index.htm

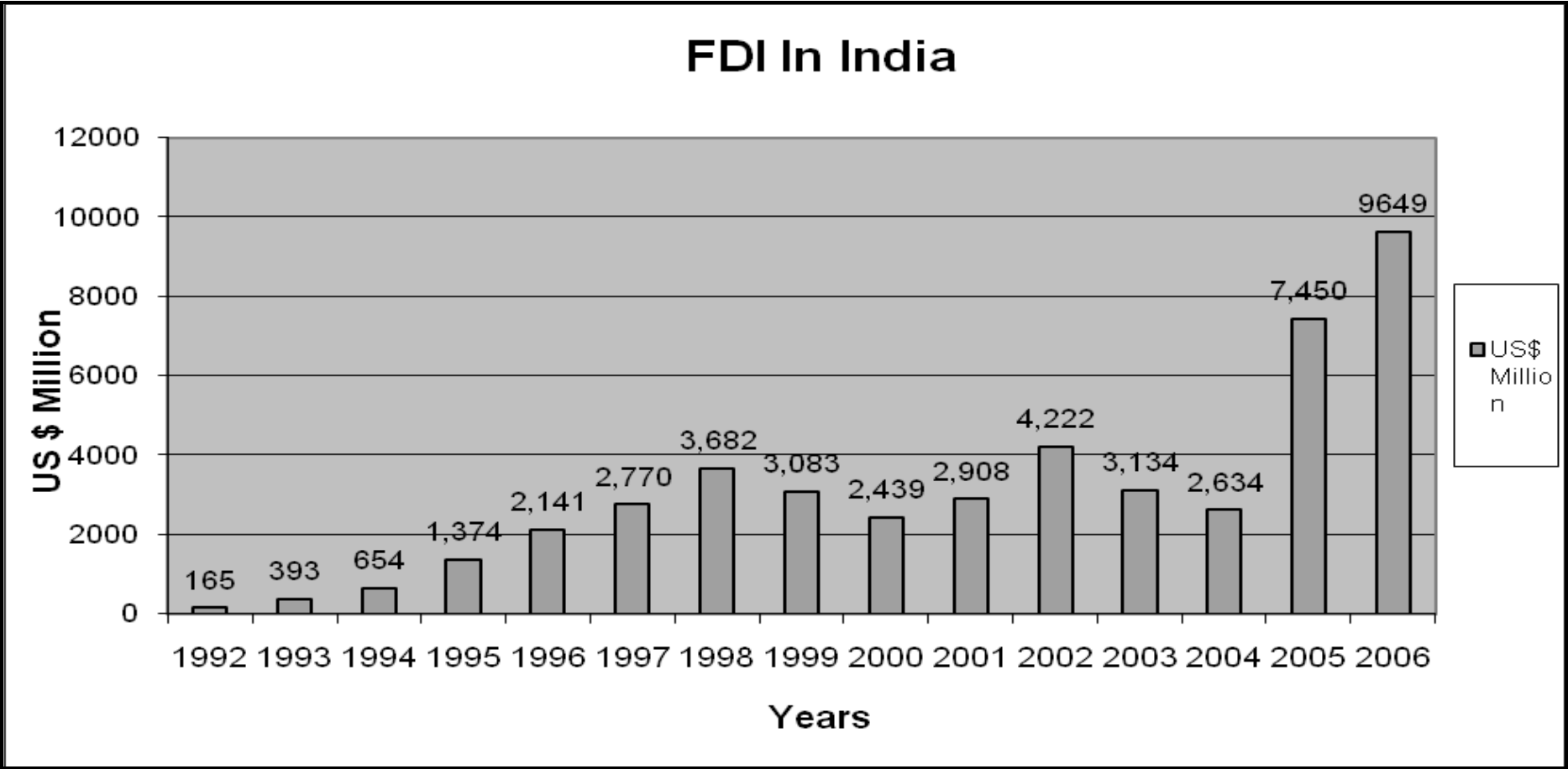


Figure 5.1: Foreign Direct Investment in India between years 1992-2006

Source: Department of Industrial Policy and Promotion. Ministry of Commerce and Industry. The Government of India.
http://dipp.nic.in/fdi_statistics/india_fdi_index.htm