8.0. INTRODUCTION

After conducting the analysis for the impact of developmental variables on international FDI pattern, this chapter summarises the whole of the study in brief for an overview and includes the conclusions, recommendations, limitations and scope for the further study.

8.1. BRIEF REVIEW

Globalisation can be summarised opening-up of markets, leading to transfer of capital, technology and people. However, another important dimension of globalisation is multilateralism. It would be obvious that the former cannot be effective without later. One of the major objectives is of international economic reforms was to encourage multilateralism. The economic basis of multilateralism lies in allocative efficiency. This implies that economies are able to import from most efficient sources and are able to export to the best destinations. In an analogous manner, it can be said about Foreign Direct Investment (FDI) that multilateralism implies importing capital from a variety of sources as may be most efficient. Rather than restricting to a bilateral basis. Similarly, the obverse of this phenomenon would be to export capital where it can be most efficiently utilised by combining capital with other resources optimally.

Second, these transfers should work as two way relationship, which implies that the process of globalisation should have gains for both the home country and the host country.

Therefore, we propose to study FDI flows both from the point of view of inward FDI where the host country is the recipient country, as well as, outward FDI where the home country is source. If globalisation is a progression in the international economic relations, it implies that capital flows are substituting trade flows. The assumption behind such a progression is that there is a decision to switch from relative inefficient trade to more efficient alternative of international relocation of production or FDI.
Given this framework, any study which examines international capital flows must be based on both inflows as well as outflows on the one hand and the gains to both the host and from the home on the other hand. In this scene, both inflows as well as outflows have to be efficient. If FDI flows are replacing trade flows, then gains from FDI must parallel gains from trade. These extant studies do not distinguish between the factors that determine capital outflows and the factors that determine capital inflows, the former is a home country perspective and while the later is host country perspective. The host country characteristics determine motivation for investment in the host country by the home country since outward flows are available from the home country.

The main objective of the study is to understand the impact of developmental variables on international FDI pattern. To fulfil this principal objective, we have also made study international FDI pattern, concentration of international FDI inflows and inward stock and dominance of international FDI outflows and outward stock, at different levels of economic development.

8.2. RESEARCH METHODOLOGY

Data Sources: we have collected online data for our study mainly from UNCTAD and World Bank website. Our period of study is 1990-2009.

Data Set: we have constructed a data set of 53 common countries for FDI which have continuous data for periods 1990-2009 in terms of inflows, inward stock, outflows and outward stock. However, continuous data on developmental variables (socio-economic variables) have available only for 36 common countries included in FDI data set. Therefore we have taken 36 common countries data set for our study. We have employed a number statistical and econometric tools for analysing each objective are different.

Growth Index: We have estimated growth of FDI in absolute and percentage terms in subsequent years with respect to base year. This index reveals the international patterns of FDI in terms of flows and stock during period 1990-2009.

Growth (Semi-Log) Equation: Growth equation is used to find out the annual compound growth of FDI in terms of inflows, outflows, inward stock and outward stock. We have applied semi-log equation on growth index in absolute and percentage terms.
Three Levels of Indices: A new set of simple, temporal and relative indices are calculated to find out distribution of FDI inflows across the countries on the line of their GDP. This relates to the equity aspect of FDI distribution.

Herfindahl-Hirschman Index of Concentration: This index is applied to know distribution patterns of FDI inflows and inward stock across countries. This index tells us whether there is a competition for FDI inflows across countries or FDI inflows is concentrated in a few countries only. This index is also applied to concentration of FDI in developed and developing countries.

Index of Rank Dominance: Index of Rank dominance (IRD) of FDI in terms of outflows and outward stock is calculated to find out most dominating countries. Relative Index of Rank Dominance (RIRD) is used to find out the relative dominance of a country within dominating countries. This is used to know overall dominance across globe, dominance pattern within developed and developing countries.

Bodenhorn’s Measure of Mobility and Turnover: This is used to find out competition among source countries for FDI in terms of outflows and outward stock. If there is a high mobility and turnover then it indicates competition among FDI source countries for outflows. This technique is used to measure competition for outflow. This is applied in case of international outflows across countries as well as developed and developing countries case separately.

Principal Component Analysis: we have taken developmental variables like population, GDP, and so on, which has a high degree of correlation amongst independent variables. This may create problem of multicollinearity. Therefore we used Principal Component Analysis (PCA) to determine the “principal variables.” The method of Principal Component Analysis (PCA) has two purposes. Firstly, we use PCA for data reduction, especially where the variables are interrelated. Secondly, we use PCA for compilation of a composite index.

For estimating the determinants of international FDI patterns we have used a two step procedure. Firstly, components of FDI patterns are many and are correlated. Variables like GDP, Human Resources, Trade Openness, and so on may be correlated. Under
such circumstance it is not possible to use the variables directly in a regression
framework on account of multicollinearity. Secondly, when there are a large number of
variables we need to collapse them into a single independent variable with the help of
PCA. The variable should be such that it captures all the information contained in all
the individual variables. In view of these weaknesses of an ordinary regression
framework, we opt for an alternative method - Principal Component Analysis (PCA).
PCA is based on a linear transformation of the regressors so that they are orthogonal to
each other by design. Hence, no information contained in the points in the event space
is lost. Second, the normality assumption is not essential in PCA. Third, with such a
dispersed set of outcomes, PCA is ideally suited because it maximizes the variance
rather than minimizing the least square distance.

**Composite Index:** Through PCA we get both the unrotated and rotated solutions
explain exactly the same amount of variation in the variables. The component scores
(both rotated and unrotated), with respect to the first component are calculated. The
most popular orthogonal rotation procedure is Kaiser’s Varimax rotation. We therefore
retain this procedure. Once the number of retained principal components is determined
and the rotated component scores obtained, we selected one variable to represent each
of the retained principal components. The variable that has the highest loading on a
component is chosen to represent that component, provided that it has not already been
chosen. If it has been chosen, the variable with the next largest loading is selected. The
procedure starts with the largest principal component and proceeds to the smallest
retained component.

**Panel Regression Model: The Fixed Effects Model (Least Squares Dummy
Variable Model):** The models which capture the individual effects are called fixed
effects models. We have selected fixed effects model that has differential intercepts and
slopes. This kind of model has intercepts and slopes that both vary according to the
country grouping. To formulate this model, we include not only country dummies, but
also their interactions with the time-varying covariates. The one big advantage of the
fixed effects model is that the error terms may be correlated with the individual effects.
Therefore, the individual effects have been captured.
In our case we are interested in knowing the ‘individual effects’ is two ways. Firstly, we wish to know the effect of the presence of a difference in respect of developing countries vis-à-vis developed countries, in terms of the intercept. Secondly, we wish to know the effect of the difference amongst elasticities of the determinants with respect to developed countries. Therefore, we have designed the panel model so as to capture two effects. The first effect is due to scalar effect. The second effect is due the dynamic changes in the determinants (developmental variables). In the first case the difference dummy with respect to the base country grouping would significant if the initial level of FDI in the developed countries is higher (or lower) than the general trend. In the second case it would show whether the determinants differ between all countries in general and the developed country grouping. Similarly, over a period of time the differential effect would be captured by the interactive dummy which is a product of the independent variable and the country grouping dummy that is in difference form. Similarly, we have set of equations which capture the effect of the difference between the top ten countries in each country grouping, namely, developed and developing.

While it is an ordinarilily practice to indicate the expected sign. In our case it is not possible to assign any sign because of difference between countries grouping, top ten countries within each group, stock and flows, inflows and outflows and inward stock and outward stock. Therefore, it is not possible for us to give any predetermined expected sign of developmental variables $\beta$ (beta) coefficient. In fact, as a part of our methodology we are try to establish whether such difference exist between countries grouping, top ten countries within each group.

8.3. SUMMARY OF ANALYTICAL RESULTS

A brief summary of the results of the analysis has been discussed below:

8.3.1. FDI: Growth Index and Growth Rate

Growth index indicates the increase of FDI in subsequent year with respect to base year. In absolute term, FDI has been increased many times with respect to base year 1990 in each group countries. Annual growth rate of international FDI is 12 percent in terms of flows and stock. Developed and developing countries are following growth
pattern of international FDI follow countries. However, rate of growth is high in case of transitional countries.

In percentage term, growth index of developed countries has been declined in all four cases. However, decline is larger in case of inflows. However, growth index has increased in all four cases for developing and transition countries. Annual decline rate of developed countries is slow, that is, less than one percent in all four cases. Growth rate is positive in case of developing and transition countries. FDI flow and stock have been increasing globally in magnitude. However share of developed countries has been slowly declining.

8.3.2. FDI Inflows and GDP: Three Level Indices

On an average the countries are attracting FDI greater than their due share. Some countries are attracting more FDI than their proportionate share with respect to GDP. GDP of a country indicates general growth. Therefore, countries which have higher GDP growth should also have higher FDI growth. But the analysis shows that distribution of FDI across countries is not made on the basis of GDP growth. However, average of ratio of temporal index of FDI and GDP has been continuously decreasing over different point of time. This implies that concentration of FDI inflows has been decreasing with the increase of competition for FDI among countries.

8.3.3. Concentration Pattern of Inward FDI

Herfindal’s index of concentration clearly indicates that there is a low concentration in distribution of FDI in terms of inflow and stock. It implies that distribution of FDI has been moving towards uniform distribution of productive resources across the countries, which is a basic purpose of globalisation and competition. The low concentration ratio implies that the share of developing countries is increasing because earlier developed countries were main recipient of FDI. And FDI mainly concentrated in a few developed countries only. FDI inflow, growth rate is 1.7 percent, negative and statistically significant at 5 percent. It clearly indicates that concentration of FDI inflow is decreasing over periods. FDI inward stock follows the pattern of inflow. Growth rate is 1.8 percent, negative and highly significant at one percent. Concentration of FDI has decreased on overall basis.
The first observation is that inward capital movements as measured by flows and stock generally show a decline in the concentration ratio. The patterns in concentration of flows are divergent, as between developed and developing countries. This trend points towards a substitution between, the two broad groups of countries, in terms of concentration of capital flows. It means when concentration of FDI inflow is decreasing in developed countries then it leads to increase in developing countries. In terms of FDI stock, concentration of stock is consistently decreasing in both developed and developing countries. Decline rate is high in case of developing countries. Regression statistics suggests that on three out of four counts the global economy has experienced declining concentration ratios. The coefficient is negative in all four cases and significant except in case of developed countries. This means that except for inflows in the case of developed countries (which they largely received from developed countries) the distribution of capital flows is more uniform across countries. This should augur well for the global economy. Since our interest lies with developing economies it shows that developing economies gain significantly in both terms – stock and flow (-0.044 and -0.021). The gain is greater in stock, which points to a more uniform factor endowment of capital emerging in developing countries. A caveat to this trend may be whether the developing countries that are beneficiaries of the spreading out are able to utilize these capital stocks better and further attract FDI.

8.3.4. Dominance Pattern of Outward FDI

In terms of outflows, the first five countries which include United States, France, United Kingdom, Germany and Japan are controlling 40 percent of international capital resources. The first ten countries dominate the pattern of outflow such that they represent more than two-third of the outflow capitals.

In terms of outward stock, the most dominant country is United States. United States has an absolute dominance. This means that United States had been at top every year during 1990-2009. The value of IRD is one for United States. The RIRD indicates that FDI outward stocks are top heavy. The first five countries control more than 40 percent of stock. The first ten countries dominate the pattern of outward stock such that they represent more than 70 percent of the outward stock.
Top ten countries except China, Hong Kong SAR are belonging to developed countries. And most of the bottom countries are belonging to developing countries. However India does not figure anywhere. This means that the pattern of distribution of FDI is highly dominated by developed countries. RIRD reveals that FDI outflows are skewed in nature.

**FDI Outflows**

In case of developed countries, top five countries represent around two-third of dominance. This means that most of FDI outflows have originated from United States, France, United Kingdom, Germany and Japan.

In case of developing countries, China-Hong Kong SAR is a most dominating. Top five countries represent around 60 percent FDI outflows amongst developing countries only. India is at eleventh position and has 2.1 percent dominance.

**FDI Outward Stock**

In case of developed countries, United States has an absolute index of rank dominance that is equal one. Top six developed countries represent more than 80 percent FDI outward stock.

In case of developing countries, China, Hong Kong SAR is a most dominating country amongst developing countries. Top six developing countries represent more than 70 percent FDI outward stock. India is at fifteenth position.

**8.3.5. Mobility and Turnover of Outward FDI**

Mobility is a churning in rank position of the leading FDI home countries. It means changes in rank position within leading countries. The measure of turnover as the number of countries below the leading FDI home countries replace the countries belonging to the leading FDI home countries. Mobility and turnover is high in case of outflow than stock. Low mobility and turnover implies dominance of a few developed countries over FDI outward stock. It means FDI outward is less competitive. Regression statistics of outflow shows that there is a 6% growth in competition amongst countries. This is statistically significant.
In flow terms there is a 6.6 percent growth in competition amongst developed countries. This is statistically significant. There is decline in competition amongst developing country outflows, but it is not significant. This is an expected result because they are not major exporters of capital. In stock terms there is a 3.4 percent growth in competition amongst developing countries. But it is not significant. In fact, very few countries amongst developing countries may be dominating the total capital outflow and outward stock.

In general, as per table 6.16, FDI outflow is more competitive than FDI outward stock and developing countries are less competitive than developed countries in both- outflow and stock.

8.3.6. Analysis Principal Component Analysis

The value of KMO test is high for all developmental variables of each countries group except trade openness variable. The value of KMO test of trade openness is less than 0.5 for each countries group. Bartlett test shows that all developmental variables are highly statistically significant except trade openness of developing countries.

8.3.7. World: FDI and Economic Development

FDI Inflows

The annual growth rate is 6.2 percent. Labour and Openness are not significant. Human resource coefficient is negative and significant. Infrastructure, market and resource have positive coefficient and significant. It indicates efficiency, market and resource-seeking FDI.

FDI Inward Stock

The annual growth rate is 5.8 percent. However growth rate of developed countries as a group is 4.3 percent higher. All developmental variables are found significant.

On a comparative basis, it can be seen that the magnitude of infrastructure elasticity is greater in case of inflow because this indicates annual changes and represents margin change whereas the coefficient for stock is lower in magnitude but its standard error is also much lower. This represents the consistent long-term trends.
Summary and Conclusion

**FDI Outflows**

The annual growth rate is 3.2 percent. FDI outflow is mainly from developed countries and since human resource is negative and inelastic but significant. It indicates that developed countries are not having any advantage in terms of human resources. The same factor is reflected in labour variable. Infrastructure is not significant. Market, openness and resource are positive and significant. Resource is most important determinant because it has elasticity greater than one.

**FDI Outward Stock**

The annual growth rate is 2 percent. Human resource, infrastructure and openness are not significant. Labour is significant but with a negative coefficient. Resource and market variables indicate that in long run FDI focused on resource-seeking and market-seeking.

**8.3.8. Developed Countries: FDI and Economic Development**

**FDI Inflows**

The annual growth rate is 11 percent while that of top ten is significantly lower i.e. 3.4 percent (= 0.111 – 0.077). Elasticity of FDI with respect to infrastructure and market are positive and elasticity with respect to human resource, labour, openness and resource are negative. Openness and human resource are not significant. Infrastructure is highly elastic at 1.72. In case of top 10, human resource and Openness are not significant. Infrastructure is negative, large and significant. Labour, market and resource are positive and significant

**FDI Inward Stock**

In general, the growth rate appears to be higher and significant. However top ten countries gain less in terms of initial stock as compared to the general trend. In terms of the growth pattern, the decline is slower in case of stock with respect to top ten countries in comparison to inflows. All developmental variables are positive, except human resource and Labour, and significant. In respect of top ten countries, there is no added advantage with respect to human resource and market.
**FDI Outflows**

In general, the annual growth rate is 4.4 percent. Infrastructure and resource are not significant. Other variables are significant but labour and openness have negative coefficient. Out of six slope dummies only two are significant. Human resource bears a negative sign while labour bears a positive sign.

**FDI Outward Stock**

In general, the annual growth rate is 7.7 percent. In the case of outward stock, almost all the variables are significant except intercept dummy, time dummy and openness dummy. The growth rate in stock is higher than flow.

**8.3.9. Developing Countries: FDI and Economic Development**

**FDI Inflows**

The variables are not significant except market. Even the growth rate which is 0.025 is not significant. Neither is the time dummy is significant. Top ten countries are also not gaining. Two variables whose slope dummy is significant are infrastructure and labour. Infrastructure is negative but elastic and significant. In case of labour elasticity is one, positive and significant. Therefore top ten countries are essentially gaining on account of raw labour.

**FDI Inward Stock**

The significant difference between inflows and inward stock can be explained in term of uncertainties in the year to year to condition where the long term factors allow inward stock to indicate stable pattern. Hence in the case of inward stock, although the growth rate is extremely slow and insignificant. That of top ten countries is highly significant and is in the range of 8.5 percent per annum. The elasticity of almost all factors is significant except openness. The top ten countries are receiving on a sustained basis due to resource-seeking FDI.

**FDI Outflows**

Developing countries outflow has not been growing significantly. Even the initial level is low and uncertain. In fact strongly enough for the top ten countries, the initial level is
significantly lower. Although in growth terms top ten countries indicate a significant
growth rate of 8 percent per annum. Interestingly the elasticity of most of the negative
factors human resource, infrastructure and labour are in general not significant while the
elasticities of market, openness and resource are positive and significant. Infrastructure
is a single variable whose elasticity is slightly over one in the case of top ten countries
and is highly significant. Therefore the FDI outflow is going from those countries
amongst developing countries that have a significant infrastructure base.

FDI Outward Stock

FDI outward stock from developing countries represents the stable patterns. It indicates
that this is growing at 4.4 percent per annum. The initial level is although low. Top ten
countries are not gaining both in terms of initial level and growth rate. The advantages
that come due to resource are consistent in terms of flow and stock. This implies that
such FDI which is prompted by resources. In terms of top ten countries, infrastructure is
most distinguishing feature.

8.4. HYPOTHESES TESTING

8.4.1. Primary Hypotheses

Seven primary hypotheses have been stated below:

H$_1$: Concentration pattern of inward FDI has not changed.
           This hypothesis has been rejected because the concentration of FDI has fallen in
terms of inflows and inward stock. The concentration of inward FDI has also
fallen in case of developed and developing countries grouping.

H$_2$: Dominance pattern of outward FDI has not changed.
           This hypothesis has been accepted because outward FDI has dominated and
controlled by a few developed countries over period of twenty years. USA has an
absolute dominance in FDI outward stock over twenty year.

H$_3$: There has been a decline in international FDI flows.
           International FDI flow has increased many times over period of twenty year.
           International FDI inflow is increased at 12 percent per annum. Thus, we have
rejected this hypothesis.
Summary and Conclusion

H4: FDI flow is not increasing towards developing countries.
With globalisation, WTO and liberalisation of developing countries, the share of developing countries has reached to more than 40 percent in 2009 in case of FDI inflows. Therefore, we have rejected this hypothesis.

H5: Economic development does not affect international FDI patterns.
With globalisation and liberalisation, world economy has been opened for foreign investment and has created competition amongst the host countries for attraction of FDI development does affect international FDI patterns. Due to intensive competition amongst host countries, investors are focusing on countries with strong skilled manpower, infrastructure, market, lower labour cost, resource etc. it means economic development affects international FDI patterns. Thus, we have rejected this hypothesis.

H6: Determinants of FDI do not differ across developed and developing countries.
Developmental variables affect international FDI pattern. However, these variables do not affect in same manner in case of developed and developing countries. The impact of these variables is clearer and distinct in case of developed countries. But, in a case of developing countries, developmental variables are less distinct. Therefore, we have rejected this hypothesis.

H7: Determinants of FDI do not differ across top ten and rest of the countries.
The results show how the top ten countries in each group behave differently from other countries. The results give clearer and distinct patterns in case of top ten countries. Thus, we have rejected this hypothesis.

8.4.2. Secondary Hypotheses

H8: Concentration pattern of inward FDI has not changed in developing countries.
Concentration of inward FDI has fallen in developing countries. Concentration of FDI inflows and inward stock has fallen at 2.1 percent and 4.3 percent per annum respectively. Therefore, we have rejected this hypothesis.

H9: Concentration pattern of inward FDI has not changed in developed countries.
In case of developed countries, concentration of inward FDI has fallen. Concentration of FDI inflow has fallen at 1.3 percent per annum but not statistically
significant. However, concentration of FDI inward stock has decreased at 1.6 percent per annum and it is statistically significant. Therefore, we have rejected this hypothesis.

**H$_{10}$**: Dominance pattern of outward FDI has not changed in developing countries.
More than 60 percent of FDI is dominated and controlled by top five developing countries within developing countries grouping. Therefore, we accepted this hypothesis.

**H$_{11}$**: Dominance pattern of outward FDI has not changed in developed countries.
More than 70 percent of FDI is dominated and controlled by top five developed countries within developed countries grouping. USA has an absolute dominance in terms of FDI outward stock. Therefore, we have accepted this hypothesis.

**H$_{12}$**: Human resource does not affect FDI.
Human resource represents skilled manpower. It affects FDI in terms of flows and stock. However, degree of affect is differed within different country grouping. It also differs between top ten and rest of the countries within each country grouping. Therefore, we have rejected this hypothesis.

**H$_{13}$**: Infrastructure does not affect FDI.
Infrastructure plays very important developmental role. It provides facilities and incentives for FDI. It attracts efficiency-seeking FDI. However, it does not affect in same manner between different country groupings. It also affect differently between top ten and rest of the countries within each country grouping. Thus, we have rejected this hypothesis.

**H$_{14}$**: Labour does not affect FDI.
Labour represents raw human force. Availability of cheap labour attracts FDI. But its behaviour is differ between developed and developing countries and also between top ten and rest of the countries within each country grouping. Thus, we have rejected this hypothesis.
H$_{15}$: Market does not affect FDI.
Market facilitates consumption of production. So, it affects FDI and attracts market-seeking FDI. It affects FDI in terms of flows and stock. However, degree of affect is differed within different country grouping. It also differs between top ten and rest of the countries within each country grouping. Therefore, we have rejected this hypothesis.

H$_{16}$: Trade openness does not affect FDI.
Trade openness affects FDI. But its behaviour is differ between developed and developing countries and also between top ten and rest of the countries within each country grouping. Thus, we have rejected this hypothesis.

H$_{17}$: Resource does not affect FDI.
Resource affects FDI and attracts resource-seeking FDI. However, it does not affect in same manner between different country groupings. It also affect differently between top ten and rest of the countries within each country grouping. Thus, we have rejected this hypothesis.

8.5. CONTRIBUTION TO THE STUDY
This study is laid out at a broad cross country level. There are few studies which encompass such a vast array of countries across the world. This is a broad based study which examines the FDI patterns of fifty three countries across three countries grouping. Several issues and approach to FDI have been empirically measured and tested in this cross country. The contribution of the study can be summarised in the following manner:

1. The extant theories are based on home country perspective whereas we are considering both inflows and outflows. Therefore we are considering both home country as well as host country.
2. We have shown that there is fall in the concentration of FDI inflows.
3. We have shown that there is marginal fall in dominance of FDI outflows
4. We have shown that determinants of home country and host country need not be the same.
5. We have shown that determinants may not act in the same manner in the case of the top ten countries in each country grouping.
6. We have shown that main determinants of FDI are infrastructure, resource and market. Trade openness, labour and human resource, more often than not are not significant determinants. This confirms the traditional wisdom as per MNEs theories that FDI is efficiency-seeking, resource-seeking and market-seeking in that order.

8.6. POLICY RECOMMENDATIONS

In spite of twenty years of globalisation and liberalisation, the dominance of developed countries has not changed. USA in a particular remains unchallenged in terms of the outflows, despite competition amongst developed countries as a block. There position remains unchallenged. Even the repeated crises have not shaken the dominance of handful of developed countries. This points out towards the need for better multilateral mechanisms which would ensure greater competition amongst the source countries (home countries). Even in terms of developing countries, it is surprising that the largest economy like the BRIC nations do not dominate the scene globally. The few developing countries have made a mark are tax havens. Therefore it is necessary that real factors are promoted rather than financial consideration such as tax. The world at large would benefit if international relocation of production is driven by real factors. There would be an optimal resource allocation leading to growth, development and welfare globally. Since top ten countries have a distinct behaviour compare to all other countries within their own grouping, it shows that the principles of level playing field, most favoured nations and national treatment are not being implemented in the true spirit.

All of the above points out towards a deep divide amongst developed and developing countries, inflows and outflows, long-term policy and short-term policy and so on. Therefore, the broad policy conclusion is that there is still a great need for a more uniform policy environment based on multilateralism and a spread of economic development and greater participation by all countries in different countries groupings and within each country grouping. Following are policy recommendation:

1. Trade openness is not significant. Therefore TRIMs which is a trade related investment measure is not going to be very meaningful. Therefore this emphasises the need for genuine MAI.
2. Bodenhorn’s measure of competition and concentration both point out towards increasing competition in international pattern of FDI. Therefore it is indicative that all countries in the world should adequately incorporate FDI into their competition policy.

3. While analysing the determinants of FDI stock, it has been seen that long-term trends are more reliable and effective. On the other hands, trade openness variable is not significant. This implies that short-term policies are not effective and there is a need for having long-term policies which strengthen the trend towards long-term development of FDI.

4. The results of the analysis of determinants clearly show that there are difference among countries groupings as well as top ten and other countries. This implies that for policy it is all important to establish a uniform MAI.

5. Main determinants of FDI are infrastructure, resource and market. Trade openness, labour and human resource, more often than not are not significant determinants. These factors are not significant because nature of FDI has changed. It has shifted from colonial investment in plantation and mining. As for trade openness, it encourages trade but FDI is an alternative to a trade. Therefore, sign of trade openness is found to be negative in certain cases. This confirms the traditional wisdom as per MNEs theories that FDI is efficiency-seeking, resource-seeking and market-seeking in that order.

**8.7. LIMITATIONS OF THE STUDY**

There are following limitation of the study:

1. The major limitation has been that data constraints did not allowed inclusion of all countries. In the final analysis, only thirty six countries were included.

2. Time period did not permit long term time-series analysis while testing for time-series properties such as co-integration.

3. In the absence of a well developed multilateral policy framework, a cross country analysis could not be complemented by a policy analysis.

4. Other approaches such as Computable General Equilibrium (CGE) models could not be developed on account of the complexities of such an endeavour.
8.8. SCOPE FOR FURTHER RESEARCH

This study is an attempt to understand the impact of developmental variables on FDI in terms of flows and stock. However, there are following areas on which further research can be done:

1. The studies can be developed wherein linkages between specific policies and resultant impact can be studied, for instance impact of financial liberalisation on international FDI flows.
2. There could be other studies which give the long-term view in terms of the changing policy environment through a study of structural breaks and co-integration.
3. The impact of FDI on economic development has also not been emphasised in our studies. This can be studied in various ways by looking at the impact of FDI on structure of the economy, productivity, capital formation and so on.

8.9. CONCLUSION

This thesis is an attempt at examining the global patterns in FDI in relation to economic development. The core of the theme of research is based on the idea that with liberalisation and globalisation, international capital flows would be encouraged. This is expected as a part of the new economic order towards multilateral capital flows in the form of FDI, that are expected to lead to efficient resource allocation globally so that along with FDI, all other resources would be harnessed in such a manner that global economic development would take place and global welfare would improve.

With the help of a three-pronged analysis, this thesis examines “Patterns of Foreign Direct Investment Flows and Economic Development- a Cross Country Analysis.” At the first level, it measures the concentration of inward FDI especially amongst the developing countries, so as to establish whether over a twenty year period FDI flows have let to greater concentration of capital or a rationale distribution of capital amongst all countries. Secondly, it examines the dominance pattern of outward FDI in terms of the stable shares and ranks of homes countries especially the developed countries with a view to understand the competitiveness amongst home countries. In the final analysis, the thesis builds up a methodology for measuring and testing the determinants of the
patterns of FDI globally in terms of FDI outflows and inflows both in terms of stock and flow. These determinants are a large set of developmental variables. An elaborate methodology of capturing the information in these variables is developed with the help of Principal Component Analysis (PCA). The study evolves a set of six composite indices namely human resource, infrastructure, labour, market, trade openness and resource. Very illuminating results obtain that establish certain basic principles of FDI theory in terms of efficiency-seeking, resource-seeking and market-seeking FDI in that order. Main determinants of FDI are infrastructure, resource and market. Trade openness, labour and human resource, more often than not are not significant determinants. These factors are not significant because nature of FDI has changed. It has shifted from colonial investment in plantation and mining. As for trade openness, it encourages trade but FDI is an alternative to a trade. Therefore, sign of trade openness is found to be negative in certain cases. This confirms the traditional wisdom as per MNEs theories that FDI is efficiency-seeking, resource-seeking and market-seeking in that order. The results throw light on how a common set of determinants exists for inflows and outflows, inward stock and outward stock and in terms of developed and developing countries. It also shows how the top ten countries in each group behave differently from other countries. It indicates that at times these countries are able to take advantage of policy framework whereas other countries are not able to do so. On the whole it is somewhat reassuring that concentration has declined but the dominance patterns remains and FDI is strongly held by developed countries. Even some of the most fast growing economies amongst the developing world do not figure anywhere in the international FDI patterns. This points out towards the role of tax heaven.

The panel regression exercises give clearer results in respect of developed countries. They give clearer results and distinct patterns in case of top ten countries. But in a case of developing countries, the determinants are less distinct. However, on the whole, the study is one of a kind which emphasises the under researched area of dominance and concentration patterns of FDI as well as economic development as a determinant of international FDI patterns. The results of the study are mixed but provide an insight into certain questions which have not been addressed to either to dominance and concentration pattern as well as the global determinants of FDI stocks and flows. The
study also points out towards the lack of a multilateral policy framework, in the absence of which there are wide variations in the determinants of FDI between developed and developing countries, as well as, top ten countries in each group.

Finally, it appears that the basic principles of most favoured nation, national treatment and level playing field are trade based and therefore, do not hold good to some extent in the case of FDI.

The above two conclusions vitally affect the international FDI patterns which show wide variations. Hence, the need for an International FDI policy cannot be overemphasised.