Patterns of Foreign Direct Investment Flows and Economic Development- A Cross Country Analysis

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ABSTRACT

1.0. INTRODUCTION

Globalisation can be summarised as 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 capital 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 the source country. 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.

2.0 RATIONALE

With globalisation, development has become a global issue. Expectation out of globalisation is that it will promote international investment flows, so that there is global development universally.

The problematic caused by FDI theory is about explaining international capital flows in a generalised framework. It ought to be generalised in three senses:
1. It should be independent of location (inward or outward);
2. It should be inclusive (developed, developing and transitional economies);
3. It should be based on countries rather than firms (not firm-centric).

Thus the rationale for studying of international FDI patterns arises from two stand points:

1. With globalisation (WTO) and liberalisation international long-term capital flows in the form of FDI are promoted. Capital is the complementary input to labour, natural resources, infrastructure etc. This leads to international relocation of production. If such flows follow rational allocation, it will lead to global optimum allocation of resources and global economic welfare.
2. If the above happens there must be a visible relationship between socio-economic variables (economic development) such as labour, human resource, infrastructure, openness, market, resources etc and the patterns of FDI flows internationally.

We, therefore, arrive at a set of objectives.

3.0 OBJECTIVES

On the basis of rationale of the study, we develop a set of objectives:

1. To study international trends in FDI flows and stock
2. To analyse pattern of concentration and dominance in FDI flows and stock globally.
3. To study the impact of developmental variables on international FDI flows and stock.

4.0 HYPOTHESES

In view of the above objectives, primary hypotheses and secondary hypotheses have been stated as below:

**Primary Hypotheses**

1. Concentration pattern of inward FDI has not changed.
2. Dominance pattern of outward FDI has not changed.
3. There has been a decline in international FDI flows.
4. FDI flow is not increasing towards developing countries.
5. Economic development does not affect international FDI patterns.
6. Determinants of FDI do not differ across developed and developing countries.
7. Determinants of FDI do not differ across top ten and rest of the countries.
Secondary Hypotheses

1. Concentration pattern of inward FDI has not changed in developing countries.
2. Concentration pattern of inward FDI has not changed in developed countries.
3. Dominance pattern of outward FDI has not changed in developing countries.
4. Dominance pattern of outward FDI has not changed in developed countries.
5. Human resource does not affect FDI.
6. Infrastructure does not affect FDI.
7. Labour does not affect FDI.
8. Market does not affect FDI.
9. Trade openness does not affect FDI.
10. Resource does not affect FDI.

5.0 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 36 common countries for FDI flows and stock and developmental variable for periods 1990-2009. We have employed a number of statistical and econometric tools for analysing each objective are different.

Growth Index and Growth Rate: We have estimated growth of FDI in absolute and percentage terms as well as annual growth rate of FDI. These reveal the international patterns of FDI.

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 concentration and distribution patterns of inward FDI.

Index of Rank Dominance: Index of Rank dominance (IRD) of outward FDI is calculated to find out most 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 home countries for outward FDI. If there is a high mobility and turnover then it indicates competition among FDI source countries for outflows.

Principal Component Analysis: We have used PCA for data reduction, especially where the variables are interrelated and for construction of a composite index for human resource, infrastructure, labour, market, trade openness and resources, respectively.

Composite Index: Through PCA we get the number of retained principal variables and the rotated component scores. Then the variable that has the highest loading on a component is chosen for construction of composite index, provided that it has not already been chosen. If it has been chosen, the variable with the next largest loading is selected.

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.

6.0. 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 analysis. 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; still the major developed countries dominate outward FDI.
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.

7.0. POLICY RECOMMENDATIONS

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 (Multilateral Agreement on Investment).

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.

4. On the other hands, trade openness variable is not significant. This implies that short-term trade policies are not effective and there is a need for having long-term policies which strengthen the trend towards long-term development of FDI.

5. 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.

6. 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.

8.0. CONCLUSION

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. The study evolves a set of six composite indices, namely, human resource, infrastructure, labour, market, trade openness and resource. Very illuminating results obtained that establish certain basic principles of FDI theory in terms of resource-seeking, market-seeking and efficiency-seeking FDI. 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. 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 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 hitherto dominance and concentration pattern as well as the global determinants of FDI stocks and flows. The study also points towards failure of global policy in FDI – the lack of multilateral policy.