# Determinants Of FDI Inflows To Developing Countries Of Asia

\* Gulshan Kumar \*\* Neerja Dhingra \*\*\* Meenu Saihjpal

### **ABSTRACT**

The present study is an attempt to identify the core economic factors affecting the FDI inflows to the developing countries of Asia by making use of the Exploratory Factor Analytic Technique. Principal Component Analysis (PCA) was followed after ensuring the adequacy of data with the help of correlation coefficient matrix, Kaiser-Meyer-Oklin index and Bartlett's Test of Sphericity. PCA is done with Varimax Orthogonal Rotation. The results found indicate that the core economic factors influencing the FDI inflows to the developing countries of Asia are-the economic strength of the state, infrastructure level, size of the market, technological advancement and the availability of skilled manpower. The hosts ensuring all these factors working positively can provide a good deal of attraction to the foreign investors.

Keywords: Foreign Direct Investment (FDI), Developing Countries, Asia, Determinants

# **INTRODUCTION**

One of the most notable features of economic globalization has been the increased importance of foreign direct investment around the world. Based on the benefits associated with FDI, several developing and developed countries compete fiercely for FDI (Aluvala, 2011). The FDI environment of developing countries of Asia has undergone a sea change since 1980s and more so in recent years, which has resulted in huge FDI inflows coming to Asia. With the liberalized approach to FDI and constant changes in improving the FDI policy, it is certain that Asian countries have become an important destination for investors. However, the fact is a bit pinching that FDI in Asia is mostly concentrated in a few countries only. Actually, the export success (which is termed as an engine of growth) among the developing countries of Asia has also been concentrated only into a few countries. These developing countries upgrade themselves in skill and technology by improving the capabilities of domestic enterprises or by attracting FDI (Prasanna, 2011), which further leads to imbalanced scatter of FDI. Different countries of Asia are performing quite differently as far as FDI inflows are concerned. The regional concentration of FDI inflows into Asia to a few countries is alarming as it contains the potential for accentuating regional divergences in the development process. This compels one to think about the reasons as to how the top performers are able to pull the huge amounts of FDI. The studies like Fatehi and Safizadeh (1989), Haksom (2010) and Brada et al. (2005) maintained that the political factors are important in explaining FDI inflows. Political stability measures like elimination of regional tensions and retention of internal peace affect inward FDI performance positively. Presuming that political stability is the fundamental pre-requisite for large FDI inflows, the present study is an effort to explore the economic determinants of FDI inflows, particularly in the context of those countries of Asia, which are dominating the FDI scenario for the past many years.

# **REVIEW OF LITERATURE**

In the present study, core economic determinants of FDI in the form of pull factors in case of Asian countries are discussed (here Asia refers to the developing countries of Asia). There is a huge variety of studies, which provide valuable information on various factors determining FDI. Golder & Ishigami (1999) undertook an econometric exercise with a view to analyze the important determinants of FDI inflows to Asian countries and concluded that there

<sup>\*</sup>Assistant Professor in Economics, University Institute of Legal Studies (UILS), Panjab University, Chandigarh. E-mail: jsgsass40@rediffmail.com

<sup>\*\*</sup> Associate Professor, B.D. Arya Girls College, Jalandhar Cantt., Punjab. E-mail: neerja.dhingra@yahoo.co.in

<sup>\*\*\*</sup> Assistant Professor in Economics, University Institute of Legal Studies (UILS), Panjab University, Chandigarh.

is a strong positive influence of the size of the economy on FDI inflows. The findings were in agreement with the findings of UNCTAD's study (1993). The size of the market has been a matter of concern for the investors from highly industrialized countries. Radhakrishanan & Pradhan (2000) found that among the various determinants of FDI, the most crucial factor is the absolute size of the domestic market, openness of the economy, and the sound set of macroeconomic fundamentals. However, infrastructure does not impact FDI inflows to any significant extent. Contrary to this, Rajan et al. (2003) explained that infrastructure is the key for high levels of FDI. In their study, they stated that 'India needs massive investments to sustain high-quality economic growth, particularly in energy and infrastructure both physical and social.' Howard and Banik (2001) explored the determinants of private foreign direct investment and explained the variables in terms of 'domestic pull' and 'external push' factors. The market size and gross domestic investment are considered as domestic pull factors, and exchange rate and degree of openness are considered as the push factors. The analysis has revealed that the ratio of exports to GDP was the only economic determinant of FDI. Foreign investors have been found to be attracted because of the strategic geographical position of some countries and the prospect of marketing their products to a global market. Blomstrom and Kokko (2003) found that FDI appears less positive in least-developed economies, suggesting the threshold level of development. Banga (2003) concluded that FDI is found to be attracted to large market size, low labor cost, high productivity of labor, financial health of the economy and higher availability of electricity in the economy. Bhati (2006) brought out two main findings that percapita GDP and export level of the country are the significant influencers, but the rest of the socio - economic variables like literacy rate, external debt, inflation rate and power consumption, which are generally considered as important determinants of FDI have an insignificant effect. Sahoo (2006) on the basis of panel co-integration estimation revealed that FDI, and all its potential determinants have a long-run equilibrium relationship. The major determinants of FDI in South Asia are market size, labor force growth, index of trade openness and infrastructure level. However, the most influential are market size and labor force growth. Resende (2010) explored that the size of the domestic market, attractiveness of the domestic market and technology growth are statistically significant in determining FDI in India.

However, the present study differs from the prior research as it is an effort to make use of the technique of exploratory factor analysis to explore the most effective and significant factors in case of FDI inflows to various countries of Asia. In this context, the studies which have undertaken Exploratory Factor Analysis are of great interest. Singh and Bawa (2000) used the technique of factor analysis to isolate the factors which are responsible for variations in agricultural productivity in various districts of Punjab. Factor analysis is a powerful technique which cannot only take care of multicollinearity, but can also describe a set of independent variables adequately by a smaller set of factors. Kumar, Gupta and Sidhu (2007) attempted to identify the factors affecting the growth of sports goods' industry in Punjab. The study made use of the technique of factor analysis and gave the minimum number of powerful factors by applying Principal Component Analysis followed by Varimax Orthogonal Rotation method.

#### OBJECTIVES OF THE STUDY

The present study has been conducted with the following objectives:

- 1) To explore the performance of the developing countries of Asia in pulling FDI.
- 2) To rank the developing countries of Asia as far as FDI inflows are concerned.
- 3) To identify the core economic factors affecting the FDI inflows to the representative countries of developing Asia.

# **DATABASE AND METHODOLOGY**

The present study is based on secondary data. The required data have been extracted from the World Investment Report (2010), UNCTAD. To study the country wise FDI inflows to developing Asian countries, tabular analysis of compiled data has been made so that meaningful inferences can be drawn. Percentage shares of different countries receiving FDI were calculated on the basis of which the representative countries of developing Asia have been extracted. The present study has the objective of identifying the economic determinants of FDI according to the representative countries of developing Asia. For this purpose, the technique of exploratory factor analysis was applied by taking the data of the representative countries of Asia. The variables affecting the FDI inflows were selected on the basis of the study of previous literature. A set of twenty one variables related to the representative

Year		1991-2003	
	State /Union Territory	Amount Approved in ₹ Million	Percentage to Total Rank
Andhra Pradesh	134067.56	4.60	6
Assam	14.95	0.00	33
Bihar	7397.05	0.25	18
Gujarat	188337.06	6.46	5
Haryana	38664.45	1.33	11
Himachal Pradesh	11740.17	0.40	16
Jammu & Kashmir	84.1	0.00	28
Karnataka	240024.14	8.24	4
Kerala	15460.31	0.53	14
Madhya Pradesh	92713.53	3.18	8
Maharashtra	508328.67	17.45	1
Manipur	31.85	0.00	30
Meghalaya	529.6	0.02	25
Nagaland Nagaland	36.8	0.00	29
Odisha	82293.13	2.82	9
Punjab	24286.89	0.83	13
Rajasthan	30121.38	1.03	12
Tamil Nadu	250559.94	8.60	3
Tripura	30.88	0.00	31
Uttar Pradesh	49146.03	1.69	10
Uttarakhand	1256	0.05	22
West Bengal	93050.35	3.19	7
Chhattisgarh	6327.76	0.22	19
Jharkhand	1445.15	0.05	21
Andaman & Nicobar	137.87	0.00	26
Arunachal Pradesh	110.6	0.00	27
Chandigarh	1960.48	0.07	20
Dadra & Nagar Haveli	1239.8	0.04	23
Delhi	351424.85	12.06	2
Goa	9900.77	0.34	17
Lakshadweep	5	0.00	34
Mizoram	15.22	0.00	32
Puducherry	12630.79	0.43	15
Daman & Diu	554.64	0.02	24
States not indicated	759312.92	26.06	
Total	2913241.92	100	

countries of Asia was taken to extract the main factors influencing the most. The data relating to these variables was extracted from World Competitive Report, 2010. The codes of all the variables are mentioned in the Table 3.

Country	Aggregate FDI inflows for 1981-2010 in US\$ million	Percentage share in aggregate	Rank
India	168989.62	5.68	4
Afghanistan	1547.48	0.05	33
Bangladesh	8018.68	0.27	24
Bahrain	14749.13	0.50	20
Bhutan	166.54	0.01	38
Brunei Darussalam	10633.36	0.36	23
Cambodia	4977.07	0.17	28
China	993037.43	33.40	1
Hong Kong	495839.01	16.68	2
Indonesia	53906.10	1.81	12
Iran	21102.21	0.71	18
Iraq	5114.13	0.17	29
Jordan	17621.40	0.59	19
Korea, Dem. People's Rep. of	1437.55	0.05	33
Korea, Republic of	86670.87	2.92	9
Lao People's dem. Rep.	1562.07	0.05	33
Kuwait	929.14	0.03	36
Lebanon	32052.95	1.08	14
Macao	11889.83	0.40	22
Maldives	225.72	0.01	38
Mongolia	2382.86	0.08	31
Malaysia	99809.17	3.36	7
Myanmar	6317.47	0.21	26
Nepal	141.57	0.00	
Oman	13493.11	0.45	21
Pakistan	28724.19	0.97	16
Palestine	1204.80	0.04	35
Philippines	31455.00	1.06	15
Qatar	28111.88	0.95	17
Saudi Arabia	155625.42	5.23	5
Singapore	282786.56	9.51	3
Sri Lanka	5488.95	0.18	27
Syria	7333.81	0.25	25
Thailand	103328.00	3.48	6
Timor-Leste	81.06	0.00	
Taiwan	57194.00	1.92	11
Turkey	97298.61	3.27	8
U A E	73110.89	2.46	10
Vietnam	43869.55	1.48	13
Yemen	4807.79	0.16	30
Total of Developing Asia	2973035.00	100	

# **DISCUSSION AND RESULTS**

The FDI inflows to the developing Asian countries experienced a phenomenal increase from US \$ 542.59 million in the year 1980-81, to an amazing high of US \$ 301366.54 million in the year 2009-10 (see Table 1). In the year 1980-81, the developing countries of Asia accounted for as meager as 1 percent of aggregate FDI inflows of the world (although it was low because of huge amounts of disinvestment from West Asia that year). The percentage share of these countries in the year 1981-82 was 19.20 percent. But the inflows to these countries was not consistent. There had been severe fluctuations in the years like 1985-86 and 1989-90, although these countries garnered more than one fourth share of the global FDI inflows in the year 2009-10.

However, the FDI inflows to the developing countries of Asia are heterogeneously scattered throughout the countries. After calculating the percentage shares of all the countries in the thirty years' aggregate, the fact which came to light is that China has reigned supreme over the FDI regime of developing Asia by garnering the share as high as 33.40 percent in the aggregate FDI receipts of the developing Asian countries and grabbed the top rank. Hong Kong, with 16.68 percent share in the overall inflows of FDI to developing Asian countries, in the last thirty years, won the rank two, whereas Singapore, with 9.51 percentage share managed to place itself at rank three. The subsequent rank was secured by India, which garnered 5.68 percent share of aggregate FDI inflows coming to developing Asia. Rank five, six and seven were achieved by Saudi Arabia, Thailand and Malaysia, with percentage shares of 5.23, 3.48 and 3.36 percent respectively. Apart from these, other top rankers among Asian developing countries for the study period were Turkey, Korea Republic and UAE. Other countries, Taiwan, Indonesia, Vietnam, Lebanon and Philippines occupied the subsequent ranks, although they received a very small percentage of the aggregate FDI inflows to Asia during the last thirty years. The countries like Pakistan, Qatar, Iran, Jordan, Bahrain and Oman attracted almost negligible share of FDI inflows of developing Asia during the last thirty years. Bhutan, Afghanistan, Bangladesh, Nepal, Cambodia, Lao, Myanmar, Timor - Leste, Iraq, Kuwait, Palestine, Korea

Table 3: Variables Included In The Study					
Variable Name	Variable Code				
Foreign Direct Investment in US \$	X-1				
GDP per capita (US \$)	X-2				
Export as % of GDP	X-3				
Size of domestic market	X-4				
Size of foreign market	X-5				
Quality of Infrastructure	X-6				
Energy supply	X-7				
Mobile phone lines (per hundred)	X-8				
Port infrastructure	X-9				
Air transport	X-10				
Spending on R& D	X-11				
Tertiary education rate	X-12				
Availability of scientists & engineers	X-13				
Capacity for innovation	X-14				
Time required to start a business (days)	X-15				
No. of procedures required	X-16				
Hiring & firing practices	X-17				
Taxation System	X-18				
Transparency of Govt.'s policy	X-19				
Govt.'s budget as surplus of GDP	X-20				
Strength of investors' protection	X-21				
Source : Authors' Calculation	•				

Democratic, Mongolia and Yemen, etc. could not make their identity in the last thirty years.

A noticeable fact (refer to Table 2) is that out of the forty developing countries of Asia, the top ten countries are China, Hong Kong, Singapore, India, Saudi Arabia, Thailand, Malaysia, Turkey, Korea Republic and UAE. These countries jointly account for more than 80 percent share of aggregate FDI inflows to Developing Asia. The remaining thirty countries jointly account for a paltry percentage of just less than 20 percent share and have not marked any significant presence in the FDI scenario of Asia during the last three decades. Hence, the top ten countries mentioned above can be aptly selected as countries representing Asia.

The description of variable names, their abbreviations, sources and the related time period have been given in the Table 3. In order to achieve our objective of identifying the factors influencing the inward FDI inflows, Exploratory Factor Analysis technique was adopted for the present study. The model for factor analysis is as follows (Kumar, 2010, p.41):

$$F_{1} = W_{i1}X_{1} + W_{i2}X_{2} + W_{i3}X_{3} + \dots + W_{ik}X_{k}$$
 (1)

Where

 $F_i = Estimate of i^{th} factor$ 

W<sub>i</sub> = Weight or factor score coefficient

K = Number of variable

❖ Adequacy of The Data: It is obligatory to check the adequacy of data before applying the Factor Analytic Technique. Adequacy was checked by the construction of the correlation matrix. The correlation coefficient matrix exhibits the simple correlation among all the pairs of variables selected for the analysis. Factor analysis is said to be correctly applied if this matrix contains sufficient number of correlation coefficient values more than 0.30 (Hair, 2003; Kumar, 2010, p.46). From the Table 4, it is visible that ample variables are highly correlated. Hence, the data is deemed to be fit for the application of factor analysis.

### **FACTOR ANALYTIC APPROACH**

After ensuring the adequacy of data, the various variables affecting FDI inflows were subjected to factor analysis. Principal Component Analysis (PCA) was applied for factor extraction as exhibited in the Table 5. The number of factors retained was decided on the basis of Latent Root Criterion. Only the factors having latent root or Eigen values greater than 1 were considered significant and the factors with latent roots less than 1 were considered insignificant and hence, were disregarded (Kumar, 2010, p.47).

After that, the unrotated matrix (as exhibited in Table 6) was computed. It indicates the relationship between the factors and individual variables. However, it seldom results in factors that can be interpreted because the factors are correlated with many variables (Kumar et al., 2007,p.174). The solution to this problem was found by orthogonally rotating the principal factors using Varimax Rotation. This rotation does not affect the communalities and the percentage of total variations explained, although the percentage of variance accounted for by each factor does change. It minimizes the number of variables having high loading on a factor. Varimax Rotated Matrix (Table 7) highlights the exact results of the study. It minimizes the number of variables which have high loading on a factor, and leads to good interpretation of factors. Those factor loadings which are greater than 0.45 (ignoring signs) are retained and all other less than this value are ignored (Bhaduri,2002). The factor loading of each variable on its respective factor is also exhibited in the Table 7.

### FACTOR INTERPRETATION AND FACTOR LABELING

The whole set of variables can be summed up into five main factors, i.e. F-1, F-2, F-3, F-4 and F-5, which are sufficient enough to explain the cumulative variations to the tune of 89.932 percent, which is highly significant. The description of the factors extracted is given below.

❖ Factor 1 - Strength of The State: This is the most significant factor, which explains 28.083 percent of the total variations. As many as seven variables are loaded on this factor, out of which five variables are positively loaded, and two are negatively loaded. Variable X-21, X-3, X-19, X-17and X-9 are loaded on F-1, with values as high as 0.935, 0.897, 0.858, 0.844 and 0.657, respectively. The other two factors X-16 and X-5 are negatively loaded, with loadings

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								Table 4	l : Corr	elation	n Coefi	Table 4 : Correlation Coefficient Matrix	Matri								
	X-1	X-2	к-х	X-4	X-5	9-X	X-7	8-X	6-X	X-10	X-11	X-12	X-13	X-14	X-15	X-16	X-17	X-18	X-19	X-20	X-21
X-1	П	-0.213	-0.073	0.777	0.635	-0.4	-0.126	-0.309	-0.235	-0.404	-0.022	-0.449	-0.264	0.202	0.426	0.38	0.109	0.195	0.257	0.172	-0.131
X-2	-0.213	1	0.608	-0.422	-0.672	0.8	0.695	0.808	0.808	0.698	0.314	-0.002	0.219	0.087	-0.53	-0.546	0.62	0.73	0.527	0.745	0.05
X-3	-0.073	0.608	1	-0.035	-0.684	0.766	0.682	0.485	0.89	0.73	0.375	0.121	-0.069	0.094	-0.533	-0.677	0.886	0.721	0.861	0.303	0.783
X-4	0.777	-0.422	-0.035	1	0.707	-0.415	-0.164	-0.631	-0.231	-0.268	0.275	-0.001	-0.043	0.45	0.523	0.485	-0.128	-0.11	0.075	0.083	0.03
X-5	0.635	-0.672	-0.684	0.707	1	-0.843	-0.687	-0.813	-0.807	-0.641	-0.188	-0.188	0.026	0.119	0.71	0.789	-0.632	-0.548	-0.435	-0.141	-0.528
9-X	-0.4	0.8	0.766	-0.415	-0.843	1	0.879	0.759	0.921	0.753	0.394	0.297	-0.093	0.112	-0.785	-0.817	0.62	0.587	0.485	0.511	0.417
X-7	-0.126	0.695	0.682	-0.164	-0.687	0.879	П	0.749	0.877	0.557	0.454	0.361	-0.224	0.252	-0.507	-0.661	0.593	0.605	0.397	0.593	0.342
8-X	-0.309	0.808	0.485	-0.631	-0.813	0.759	0.749	1	0.749	0.427	0.098	-0.005	-0.118	-0.108	-0.524	-0.641	0.585	0.734	0.344	0.498	0.14
6-X	-0.235	0.808	0.89	-0.231	-0.807	0.921	0.877	0.749	1	0.771	0.494	0.201	0.001	0.200	-0.587	-0.678	0.75	0.766	0.647	0.541	0.53
X-10	-0.404	0.698	0.73	-0.268	-0.641	0.753	0.557	0.427	0.771	1	0.262	0.244	0.093	-0.039	-0.435	-0.427	0.508	0.359	0.482	0.409	0.331
X-11	-0.022	0.314	0.375	0.275	-0.188	0.394	0.454	0.098	0.494	0.262	Н	0.161	0.525	0.937	-0.279	-0.075	0.099	0.31	0.224	0.329	0.222
X-12	-0.449	-0.002	0.121	-0.001	-0.188	0.297	0.361	-0.005	0.201	0.244	0.161	1	-0.005	0.028	0.002	-0.297	-0.119	-0.316	-0.313	0.19	0.153
X-13	-0.264	0.219	-0.069	-0.043	0.026	-0.093	-0.224	-0.118	0.001	0.093	0.525	-0.005	1	0.494	0.057	0.249	-0.182	0.013	-0.028	0.135	-0.182
X-14	0.202	0.087	0.094	0.45	0.119	0.112	0.252	-0.108	0.206	-0.039	0.937	0.028	0.494	-	-0.086	0.17	-0.121	0.152	0.05	0.248	0.012
X-15	0.426	-0.53	-0.533	0.523	0.71	-0.785	-0.507	-0.524	-0.587	-0.435	-0.279	0.002	0.057	-0.086	1	0.823	-0.45	-0.395	-0.43	-0.106	-0.415
X-16	0.38	-0.546	-0.677	0.485	0.789	-0.817	-0.661	-0.641	-0.678	-0.427	-0.075	-0.297	0.249	0.17	0.823	1	-0.679	-0.488	-0.502	0.202	-0.582
X-17	0.109	0.62	0.886	-0.128	-0.632	0.62	0.593	0.585	0.75	0.508	660.0	-0.119	-0.182	-0.121	-0.45	-0.679	1	0.826	0.923	0.27	699.0
X-18	0.195	0.73	0.721	-0.11	-0.548	0.587	0.605	0.734	0.766	0.359	0.31	-0.316	0.013	0.152	-0.395	-0.488	0.826	1	0.785	0.508	0.395
X-19	0.257	0.527	0.861	0.075	-0.435	0.485	0.397	0.344	0.647	0.482	0.224	-0.313	-0.028	0.05	-0.43	-0.502	0.923	0.785	1	0.206	0.657
X-20	0.172	0.745	0.303	0.083	-0.141	0.511	0.593	0.498	0.541	0.409	0.329	0.19	0.135	0.248	-0.106	-0.202	0.27	0.508	0.206	1	-0.281
X-21	-0.131	0.02	0.783	0.03	-0.528	0.417	0.342	0.14	0.53	0.331	0.222	0.153	-0.182	0.012	-0.415	-0.582	699.0	0.395	0.657	-0.281	1
Sourc	Source: Authors ' own calculations using SPSS (Ve	ors ' owr	r calcula	tions us	ing SPSS		sion 7.5)														

		Initial Eigenvalues	
Component	Total	% of Variance	Cumulative %
1	9.818	46.754	46.754
2	3.135	14.927	61.681
3	2.575	12.26	73.941
4	1.882	8.96	82.902
5	1.476	7.03	89.932
6	0.986	4.697	94.629
7	0.557	2.651	97.28
8	0.457	2.178	99.458
9	0.114	0.542	100
10	9.36E-16	4.46E-15	100
11	5.87E-16	2.79E-15	100
12	3.42E-16	1.63E-15	100
13	2.28E-16	1.09E-15	100
14	1.32E-16	6.30E-16	100
15	4.34E-17	2.07E-16	100
16	-7.25E-17	-3.45E-16	100
17	-9.23E-17	-4.40E-16	100
18	-1.90E-16	-9.06E-16	100
19	-3.01E-16	-1.44E-15	100
20	-4.20E-16	-2.00E-15	100
21	-9.25E-16	-4.41E-15	100

	Table 6 : C	ompound Ma	atrix (Withou	t Rotation)			
Variables			Component				
	1	2	3	4	5		
9	0.965	0.148	8.96E-02	-2.72E-02	8.56E-02		
6	0.947	-9.66E-02	0.188	-2.45E-02	0.143		
3	0.882	0.224	-0.242	-0.262	3.67E-02		
5	-0.878	0.389	-6.32E-02	9.31E-02	0.143		
7	0.841	0.118	0.17	4.57E-02	0.395		
2	0.838	6.93E-02	0.225	0.442	-9.13E-02		
16	-0.818	0.32	0.134	0.167	-0.106		
17	0.816	0.161	-0.5	1.57E-02	-3.98E-02		
8	0.801	-0.224	6.26E-02	0.438	-1.24E-02		
18	0.772	72 0.36 -0.258 0.311 -0.184					
10	0.734	-5.14E-02 0.167 -6.17E-02 6.58E					
15	-0.723	0.245	-5.14E-02	0.167	0.239		
19	0.692	0.383	-0.517	-6.45E-02	-0.226		
21	0.548	4.79E-02	-0.432	-0.688	-4.55E-02		

20	0.469	0.377	0.357	0.561	0.356
4	-0.387	0.805	-0.16	-0.223	0.34
11	0.368	0.624	0.554	-0.324	-0.157
1	-0.294	0.729	-0.488	0.269	0.198
12	0.145	-0.23	0.472	-0.42	0.643
14	7.37E-02	0.726	0.525	-0.244	-0.151
13	-3.61E-02	0.27	0.609	-4.86E-02	-0.599
Source: Author	s' own calculation	ons using SPSS (	Version 7.5)		

Т	able 7 : Vari	max Rotate	d Componer	nt Matrix		
Variable			Component			
	1	2	3	4	5	Communalites
1	4.62E-02	7.39E-02	0.918	-8.19E-02	-0.334	0.968
21	0.935	-0.232	-8.53E-02	1.71E-02	0.167	0.964
3	0.897	0.358	-8.19E-02	0.106	7.64E-02	0.957
19	0.858	0.251	9.69E-02	5.54E-02	-0.368	0.948
17	0.844	0.398	-3.82E-02	-0.151	-0.216	0.943
9	0.657	0.648	-0.245	0.192	0.144	0.969
16	-0.645	-0.326	0.469	0.197	-0.217	0.828
5	-0.553	-0.371	0.71	2.43E-02	-8.97E-02	0.956
20	-7.15E-02	0.928	0.173	0.168	8.17E-02	0.931
2	0.274	0.843	-0.351	0.158	-0.164	0.961
8	0.273	0.745	-0.472	-0.148	-0.117	0.888
7	0.473	0.731	-0.112	6.71E-02	0.366	0.908
6	0.543	0.635	-0.43	8.99E-02	0.268	0.963
18	0.598	0.621	3.99E-03	8.52E-02	-0.415	0.922
10	0.437	0.46	-0.344	0.128	0.2	0.577
4	5.24E-02	-0.163	0.937	0.252	0.132	0.988
15	-0.519	-0.222	0.583	-9.93E-02	-1.63E-02	0.67
11	0.252	0.225	6.79E-02	0.901	0.176	0.961
14	4.44E-02	0.112	0.272	0.891	9.23E-02	0.891
13	-0.227	-3.19E-02	-0.239	0.802	-0.228	0.806
12	-2.39E-02	8.74E-02	-0.13	4.19E-02	0.927	0.887
Eigen Values*	5.897	4.88	3.714	2.556	1.838	
% of Variance Explained	28.083	23.238	17.686	12.171	8.754	
% of cumulative Variance Explained	28.083	51.321	69.007	81.178	89.932	
Source: Authors' own calculations usir	ng SPSS (Version	n 7.5)				-

equal to -.0645 and -0.553. The factor F-1, i.e. the strength of the state, in fact, is the indicator of political stability of the country. The state which is strong enough to safeguard the investors' interest (X-21) by way of transparent government policies (X-19) and has freedom from stringent corporate laws like ease in hiring and firing practices (X-17), and less number of procedural formalities (X-16) are the most competent in attracting FDI. If the country is in a position to provide incentives to exporters (X-3) by way of maintaining ports (X-9) etc., it may pull more FDI. The size of the foreign market (X-5) does not matter much.

- ❖ Factor 2 Infrastructural Level: The second factor explains 23.238 percent variations, which means that this factor is not less important than factor one. Seven variables X-20, X-2, X-8, X-7, X-6, X-18 and X10 are loaded on this factor, with factor loadings equal to 0.928, 0.843, 0.745, 0.731, 0.635, 0.621 and 0.460 respectively. All the variables are positively loaded. The interpretation is that, the countries with sound fiscal position (X-20) due to good taxation structure (X-18) and high levels of per capita income (X-2), having the ability to spend on infrastructure (X-6) including telecommunications (X-8), energy (X-7) and air transport (X-10) are much more attractive than the countries which have less capacity for infrastructural development.
- ❖ Factor 3 Size of The Market: The third factor which explains 17.686 percent of the variations is also very important. Two variables X-4 and X-15 are loaded on it positively and have loadings to the tune of 0.987 and 0.583 respectively. The size of the domestic market (X-4), where the investors can get high levels of potential demand and take less time to start their venture (X-15) can have a significant positive effect on FDI inflows.
- ❖ Factor 4 Technological Development: The fourth factor explains 12.171 percent of the variations. Three variables loaded on this factor are X-11, X-14 and X-13, with loadings equal to 0.901, 0.891 and 0.802. This factor implies that the foreign investors are always attracted to the countries which have good technological development shown by parameters capacity and potential for innovation (X-14), its expenditure on research and development (X-11), and the availability of scientists and engineers (X-13) in the country.
- ❖ Factor 5 Availability of Skilled Manpower: The last factor which explains 8.754 percent of the variations has loading of one variable X-12, with 0.927 percent loading. The level of tertiary education in the country (X-12) facilitates the availability of skilled manpower, which is always sought by the foreign investors in the host country. However, it is pertinent to add here that the most important determinants of FDI found by the present study- economic strength of the state, good infrastructure, high level of technology and even quality human capital can be achieved only by the country which is politically stable. The present study is limited to the identification of economic determinants only. Thus, the variable, political stability has not been accounted for by the study directly. However, political stability, which is always felt to be a strong pull factor of FDI into any region, has been dealt with the inclusion of economic variables like investors' protection, infrastructural development, expenditure on research and development, transparency in policies of the govt., etc. All these variables can be visualized only in a politically stable state.

# **CONCLUSION**

The present study concludes that out of the forty developing countries of Asia, the top ten countries with reference to FDI inflows are China, Hong Kong, Singapore, India, Saudi Arabia, Thailand, Malaysia, Turkey, Korea Republic and UAE. These countries jointly account for more than 80 percent shares of aggregate FDI inflows coming to Developing Asia. The remaining thirty countries jointly account for a paltry percentage of just less than 20 percent share, and have not marked any significant presence in the FDI scenario of Asia during the last three decades. The factor analysis conducted to find the economic factors influencing FDI inflows to the top ten countries of Asia highlights five core factors. The most significant factor in attracting FDI to a country is the economic strength of the state. It is concluded that the countries which are strong due to the large size of the GDP per capita and have transparent government policies to watch the interest of the investors have a larger pull of FDI inflows. The second most important factor in attracting FDI in a country is the availability of good infrastructure like electricity, telecommunications network and airways. It can be concluded that when the countries compete for FDI, the host who is best prepared to address infrastructure bottlenecks will secure a greater amount. The third factor which influences FDI inflows is the size of the domestic market. The hosts who have large potential demand are supposed to be the fertile ground for the foreign investors, as the country can give sure and fast returns on investment. The next important

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factor in pulling FDI is the technological level of the host country, which is manifested in the expenditure made on R&D, capacity for innovation and the availability of scientists and engineers. The fifth factor which is vital for good FDI inflows is the availability of skilled manpower. However, political stability of the country, which is manifested by all the above factors, is also a fundamental pre-requisite for large inflows of foreign direct investment.

### REFERENCES

- 1) Aluvala, Ravi (2011). 'Foreign Direct Investment: Prospects and Challenges Ahead For India.' *Indian Journal of Finance*, Vol. 5, Issue 4, pp. 49-56.
- 2) Bartlett, M.S. (1950). 'Test of Significance in Factor Analysis.' British Journal of Statistical Psychology, Vol.3, pp. 77-85.
- 3) Banga, Rashmi (2003). 'Impact of Government Policies and Investment Agreements on FDI Inflows.' Working Paper No.16, ICRIER, New Delhi
- 4) Bhaduri, Saumitra, N. (2002). 'Determinants of Corporate Borrowing: Some Evidences from the Indian Corporate Structure.' *Journal of Economics and Finance*, Vol. 26, No. 2 available at <a href="https://www.jeandf.bizland.com">www.jeandf.bizland.com</a> accessed on October 8, 2009.
- 5) Bhattacharya, B. (1994). 'Foreign Direct Investment in India.' Foreign Trade Review, Vol. 28, No. 4, pp. 307-329.
- 6) Bhati Usha (2006). 'Foreign Direct Investment: Contemporary Issues.' Deep & Deep Publications, New Delhi.
- 7) Blomstrom, M. and Kokko A. (2003). 'The Economics of Foreign Direct Investment Incentives.' Working Paper No. 9489, NBER.
- 8) Brada, Joseph C., Kutan Ali M. and Yigit Taner M. (2005). *'The Effects of Transition and Political Instability on Foreign Direct Investment in ECE Emerging Markets.'* www.unece.org accessed on March 11, 2012.
- 9) Costello, Anna, B. and Osborne Jason (2005). 'Best Practices in Exploratory Factor Analysis: Four Recommendations For Getting The Most From Your Analysis.' *Practical Assessment Research & Evaluation*, Vol. 10, No. 7, pp. 1-9.
- 10) Fatehi, K. Sedah and Safizadeh M.H. (1989). 'The Association Between Political Instability and Flow of FDI.' *Management International Review*, Vol.29, No.4, pp. 4-16.
- 11) FDI Factsheets, Department of Industrial Policy & Promotion, Ministry of Commerce & Industry, Govt. of India, <a href="https://www.dipp.gov.in">www.dipp.gov.in</a> accessed on March 30, 2011.
- 12) Goldar, B. and Ishigami Etsuro (1999). 'Foreign Direct Investment in Asia.' *Economic and Political Weekly*, Vol. 34, No. 22, pp. M 50-M 59.
- 13) Gujrati, D.N. (1995). 'Basic Econometrics.' McGraw-Hill, Singapore.
- 14) Hair, Joseph F., Anderson and Black Tatham (2003). 'Multivariate Data Analysis.' Fifth Edition, Pearson Education, New Delhi.
- 15) Haksoon, Kim (2010). 'Political Stability and Foreign Direct Investment.' *International Journal of Economics and Finance*, Vol.2, No.3, available at <a href="https://www.ccsenet.org">www.ccsenet.org</a> accessed on March 11, 2012.
- 16) Howard, Michael and Banik Arindam (2001). 'Private Capital Inflows to the Caribbean: Trends, Assessment and Determinants.' *Economic and Political Weekly*, Vol. 36, No. 29, pp. 2773-2778.
- 17) Kumar, Gulshan (2010). 'Sports Goods Industry of Punjab.' Aarzoo Publications, Patiala.
- 18) Kumar, Gulshan, S. Gupta and Sidhu H. S., (2007). 'Factors Affecting the Growth of Sports Goods Industry in Punjab.' *Journal of Quantitative Economics*, Vol.5, No.20, pp.173-182.
- 19) Prasanna, N. (2011). 'Foreign Direct Investment and Manufactured Export Performance In India.' *Indian Journal of Finance*, Vol.5, Issue 1, pp. 42-48.
- 20) Radhakrishnan, K.G. and Pradhan J.P. (2000). 'Foreign Direct Investment in India: Policy, Trends & Determinants.' *Productivity*, Vol. 41, No. 3, pp. 454 462.
- 21) Rajan, R. S. (2004). 'Measures to Attract FDI.' Economic and Political Weekly, Vol. 39, No. 1, pp. 12-15.
- 22) Rajan, Ramkisken S., Rongala Sunil and Ghosh Ramya (2008). 'Attracting Foreign Direct Investment (FDI) to India.' www.freewebs.com, accessed on May 21, 2009.
- 23) Resende, Jr. Carlos, (2010). 'Determinants of Foreign Direct Investment In An Emerging Market Economy: Evidence From India.' Bryant University, accessed on February 19, 2011.
- $24) \, Rummel, R. \, J. \, (1970). \, {\it 'Understanding Factor Analysis.'} \,\, available \, at \,\, \underline{www.hawaii.edu} \,\, accessed \, on \, October \, 8,2009.$
- 25) Sahoo, Pravakar (2006). 'FDI in South Asia; Policy, Trends, Impact and Determinants.' Discussion Paper no. 56, ADB Institute.
- 26) Sidhu, H.S. and Dhingra Neerja (2009). 'Foreign Direct Investment Inflows to India: Growth and Forecasts.' *Foreign Trade Review*, Vol. 44, No. 3, pp. 24 56.
- 27) Singh, P. and Bawa R. S. (2000). 'Determinants of Agricultural Productivity in Punjab- An Empirical Analysis.' in Bawa & Raihky edited '*Punjab Economy: Emerging Issues'*, Guru Nanak Dev University, Amritsar.