RITSUMEIKAN ASIA PACIFIC UNIVERSITY

A Comparative Sample Study on the Determinants of Foreign Direct Investment In the East, South and South East Asia

By

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ABSTRACT

Purpose:

This paper provides a research proposal investigating the question of determinants of FDI in East, South and South East Asia(SESEA). significant relationships and differentials between potential Macro-economic, country specific and Transnational company specific determinants of Foreign Direct Investment in East Asia (China) the ASEAN (Indonesia & Malaysia) and the SAARC (India) using data sets from 2000-2010 are identified. The paper ascertained all objectives of the study and conducted a literature review where from a benchmark global indicators 71 variables and 71 hypotheses were identified to test the research question. The proposal was critically centred on research design and research method but also the research conducted time frames, weaknesses and bibliographic references which are to be proposed for future research in to the author's research topic. Finding of the study are to be conducted as per the time frame.

Design/Methodology/Approach

A mixed method approach to research is conducted gathering secondary data from the World Bank Statistics and mainly from the Global Market Information Database (GMID) for each country (China, India, Malaysia, Indonesia) and the IMD database, Bloomberg database, Central bank annual reports and other reports of all countries will also be scrutinized to bring meaning to the data. Primary data analysis will be conducted using the Expert Opinion surveys conducted by GMID.

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The paper proposes to use a *Partial least squares regression analysis* method where robustness of results and hypothesis are proven/disproven using Correlations, coefficients and Model significance mainly with the use of Rsquare and Q square. Furthermore since the data set was highly co integrated a Principal Component analysis was conducted and model significance was proven through cronbar alpha testing and Bartlett testing. The variable selection was based on both PLS regression correlations, and the percentage contribution of the variable score generated from the principal component analysis. This data was tested using the statistical package of XLSTAT and visually depicted through word and excel. Furthermore to stimulate the interest of the reader the data will be displayed as much as possible in the research report stage using graphical software such as XLSTAT and Excel graphing software.

Findings:

Most variables were having expected outcomes in most countries. **. It was found that 31 variables from China, 33 variables from India, 36 Variables from Indonesia and 34 variables from Malaysia had 37**. With the help of IMD server, variables that had significance were explained based on literature and facts. Current positions of the variables and there importance on a global setting has also been explored.

Research limitations and implications:

Certain variables lacked time series data and may prove to have some level of significance on FDI. Certain countries did not have the required data to test Hypothesis

and the option of estimate the mean or the nearest neighbour was used in the options under XLSTAT. XLSTAT lacked certain add ins therefore factor analysis and k-variances had to be conducted under Xlstat to ascertain Bartlett scores or cronbar alpha scores. Certain countries did not also possess sufficient FDI based literature like Indonesia and Malaysia for certain variables but had been identified in other FDI based studies around the world, in the case where no author was found the global studies were taken in to consideration. Dual rule significance rules were ascertained if the variable had a strong correlation or PCA contribution score but was supported by literature support the author considered the variable significant.

Practical Implications:

The findings will confirm whether the variables selected under the improved UNCTAD FDI potential index are significantly affecting FDI in the selected sample and to compare determinants so that policy planners in emerging markets to use the knowledge to make decisions from a perspective of financial, non financial , academics, governments and policy planners to use this as a base article for future consideration or research. Furthermore since the paper also conforms to the classifications of Dunning the catergories of FDI determinants related to each country can be compared.

Originality/value

The paper increases the scope of knowledge of international capital flows and provides a more clear understanding of the importance of internal market dynamism in attracting FDI in the East, South and South East Asia.

Contents

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Abbreviations

PLS: Partial Least Squares regression technique

SAARC: South Asian Association for Regional Cooperation

ASEAN: Association of South East Asian Nations

FDI: Foreign Direct Investment

M&A : Mergers and Acquisition

Greenfield: Greenfield Investments

PPP: Purchasing Power Parity

IMF: International Monetary Fund

PLC: Product Life Cycle

ROC: Return On capital

TNC : Transnational Corporation

MNC: Multi National Corporation\

SESEA: South, East and South East Asia

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Furthermore acknowledgment has to go to the United Nations Commerce Trade and development, The World Bank, The Asian Development Bank, International Markets Database, conference proceedings, white papers and other credible literary sources for providing excellent information. Though no primary data collection was not done the public reports of these esteemed organisation helped in constructing this piece of work.

Finally I would like to thank my creator Allah and my Family for their support and encouragement.

Introduction

FDI has been a pillar of strength for many countries as it has been an important source of financing for Nations development while it has been growth enhancing for a country while improving a nations competitiveness and productivity. FDI is also a feature of Globalisation and enhances productivity by providing new investment for technology and management (Sahoo, Pravakar, 2006). Domestic investment still accounts for the majority of the total investment in developing economies. Foreign investment can only complement this. However, each structure of FDI plays an imperative role in promoting development and sustainable growth, enhancing countries' competitiveness in relation to the world, generating employment, and increases social welfare by improving social and income disparities (UNCTAD, 2011). Non-FDI flows with unison with other FDI, flows harnessing the combinations to promote maximum results for a Country is a huge consideration for Government alike. To provide an impetus to the growth path Foreign investors should transfer intangible assets such as technological development and management know-how to the host country and provide a source of these new technologies, methods, products, organizational technologies and management skills as a strong impetus to changing a nations development path (Rashid, 2011)

As per E & Y report Emerging markets are among the leading trends that will shape the business world in the near future. It is stated that 70% of the world FDI growth will come from Emerging markets and BRIC counties in the near future. In fact the IMF forecast suggests that BRIC countries and the Asian five tigers may have also GDP levels that might surpass that of the developed nations in the world. By 2020, the BRICs are

expected to account for nearly 50% of all global GDP growth" (Young, 2011). Infact the developing world is outweighing the developed world. Based on UNCTAD World Investment Report developing countries GDP will outweigh that of the developed countries by 2014 as shown below in figure 1 while figure 2 is showing the that forecast for 2014 is the developing and transition economies are gonna outweigh the developed world by 2014 (UNCTAD, 2011) The brightest destinations for FDI continue to be Africa, the Middle East, and Brazil, Russia, India and China (the BRIC's), with Asian markets(Thailand, Indonesia, Malaysia, the Philippines, Singapore and Thailand) of particular interest at the moment. The countries suggested are mainly from the South, East and South East Asian region and are representing the highest FDI flows. Furthermore as Krugell, 2009 Suggests the distribution of FDI on a global level are now more reliant on a countries resourcefulness and its factor endowments. When foreign firms can choose between different regions, cities or towns, they locate in favourably endowed places. Investors also prefer to locate where other firms cluster together. This is also known as Agglomeration where groups of business locate neat each other. Agglomeration creates or strengthens the local intermediate goods and labour market . This affect creates positive externalities which reduce costs and increase competitiveness and hence attracts investors. Improving the overall effect of improving a countries competitiveness position globally.(Naude, 2007) "Therefore Securing a strong base in these countries will be critical for investors seeking growth beyond them" (Young, 2011)
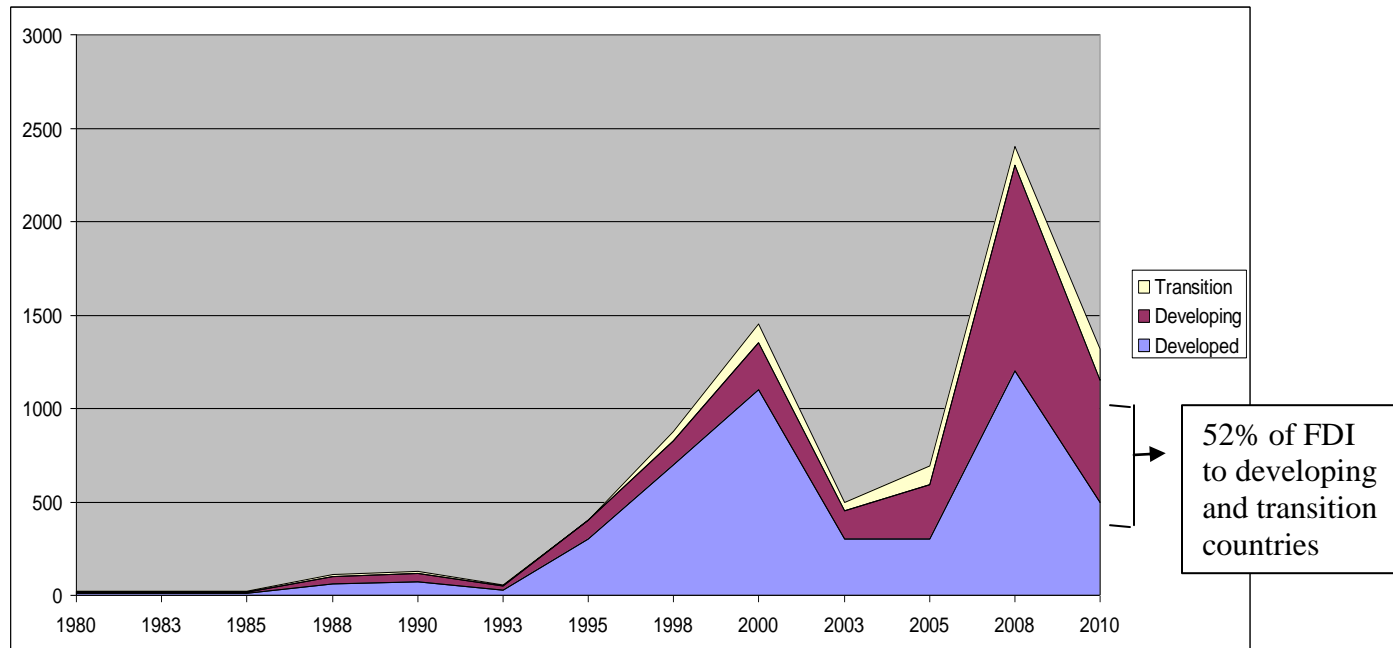
Figure 1: World FDI inflows, global and by group of economies(Source: UNCTAD

FDI/TNC database (www.unctad.org/fdistatistics
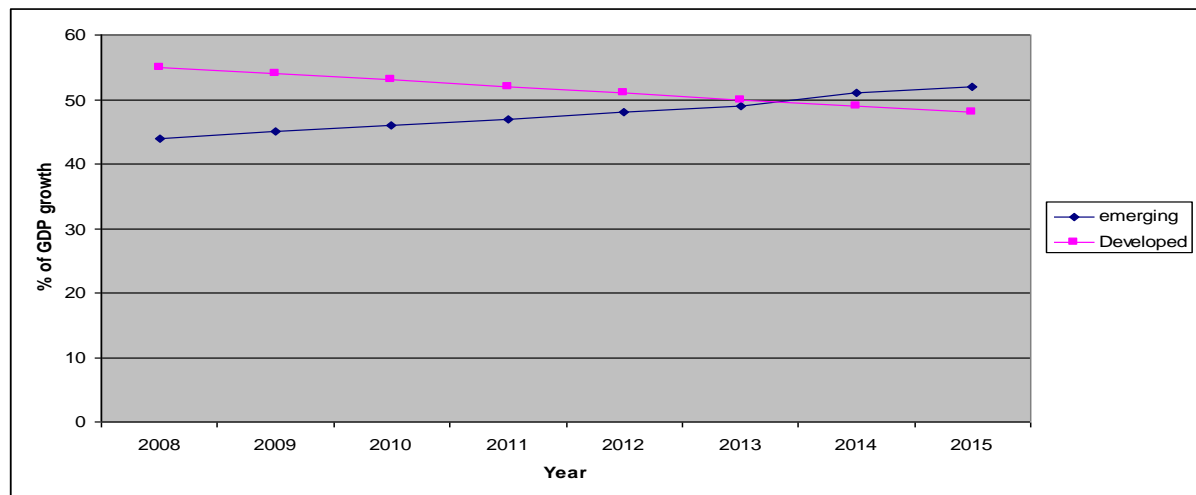
Figure 2: World GDP forecast (UNCTAD, 2011)

Before setting up base it important for the TNC, policymaker, Government or any interested party alike to understand the determinants that effect FDI in these regions prior to making any commitment in these regions, therefore the study will set out initially in chapter 1 to identify the introduction via the understanding of FDI trends which will be touched briefly by the author there by understand the investment environment . Chapter 2 will look in to literature review in relation to FDI , also conduct a literature in to current benchmark indices that measure FDI performance together with other literature which will help in understanding the location or regional FDI determinant factors of importance. Chapter 3 will be Theoratical framework and propositions will look mainly in to the Pro-view of FDI and the Dunings Eclectic paradigm. While Chapter 4 consist of materials, data collection and methodology . Chapter 5 will include the results and have a discussion of the findings. Chapter 6 will conclude the dissertation with the summary of the main findings.

Chapter 1 Trends of FDI

1.1 Global FDI trends

As stimulus packages and other public fiscal policies grow fainter in strength, as continual economic development weakens, economic revival becomes more reliant through private investments. Currently Trans National Corporations (TNC) play a regular role as private investors and also plays an integral for a nations development. (UNCTAD, 2011) Global FDI rose to $ 1.24 Billion in 2010 from $1.185 Billion, but were 15% below pre-crisis days. If compare global industrial trade/output in conjunction with these figures, it depicted figures related pre-crisis days. Forecasts from UNCTAD suggest that world FDI flows would reach pre-crisis levels of $1.4-1.6 Trillion levels in the coming years which will further grow as it did during the 2007 peak(as per UNCTAD econometric model), this is baring any world economic shocks, that might happen as a result of a series of potential risk factors (UNCTAD, 2011) These factors have become critical as unpredictability of global economic governance, possible widespread sovereign debt crisis, fiscal & financial sector imbalances, rising inflation, apparent signs of overheating certain economies; might derail global FDI and are warning signs for TNC's who will have to take appropriate strategic action to resolve such factors. (UNCATD, 2011) Figure 1 depicts that transition and developing countries receive more FDI than developed countries.

International production expansion in foreign sales, assets and employment TNC's account for 1/10 of global GDP and 1/3 of world exports. TNC contribute largely as global presence sustains price advantage, cost effectiveness and make them remain competitive with global production networks. Furthermore state owned TNC's account(650 in number) with its affiliate network (8500 in number), their outward investments account for 11% of global FDI flows. Therefore the governance of state owned TNC's have raised concerns of late about the level playing field, national security, regulatory implications for international expansion becomes important for these companies. Understanding their incentives for capital flows is important to understand FDI flows.

- In 2010, 70% FDI based projects in relation to Cross border M&A and Greenfield projects were invested in the SESEA. Mainly FDI's were inherited by BRIC countries in which China and India have gained ground In recent years following rapid economic development in home countries, abundant financial resources are strong motivations to acquire resources and strategic assets abroad. Infact Chinese and Indian companies saw large capital investment beyond their own regions. In fact in 2010, there were seven mega deals(12% of the total inward FDI came from these deals as shown below in table 1 in appendix 2 of this report were done by Chinese companies mainly to the Latin American Region.
- TNC ROI on FDI is approximately 7.3%, where leverage has shown decline, as proxy by outward FDI stock over foreign assets.

- Sales over foreign affiliates increased by 9.1%, reflecting strong revenue in developing and transition economies, employment continued to expand, as efficiency seeking investments increased.

- A new recent development is that TNC's account for nearly 80% of global FDI and TNC's are in the developing world account for 70% of global FDI flows.

- Strong profits of TNC's in emerging markets were incentives for further investments. Infact 100 of the largest TNC companies of Anglo-American origins gained 93% of their profits from these economies, this includes high EBIT positions for Coca-Cola, Toyota Motor, Unilever, SABMiller, Nestle, Barrick gold, Holcim, British American Tobacco, Nissan Motor, BASF, Honda Motor and Bayer.

- Even state owned TNC's became important to global FDI contributing largely to global FDI inflows and outflows, the 15 largest state owned TNC's account for large chunk of global FDI. Geographically 56% of State owned TNC's are located in China (50), Malaysia (50) and India (20) are among some top participants. Among them include Volkvagen group, GDF suez, General Motors, CITI group, Tata steel to just name a few.

(UNCTAD, 2011)

- In terms of mode of entry Greenfield investment has become much larger that cross-border M& A, however TNC's. Recovery of FDI flows in 2011 is reliant on the rise of both Greenfield and M&A. As depicted in figure 3, both types of projects have

increased by 36% to $ 339 Bn as a result of increased stock prices improved the purchasing power of investors to invest away from home, the higher the values of corporate assets in 2010 raised the leverage capability of investors to undertake M&A by using shares in part payment. This is in conjunction with the ongoing corporate and industrial restructuring that is creating new windows for cash rich TNC's including those from emerging markets to increase FDI in the region. However the total project value of Greenfield Investments over M&A is not surprising as varying conditionality has shifted the balance toward the favor towards Greenfield projects while a variety of divestments have plagued M & A based FDI in recent times(UNCTAD, 2011).
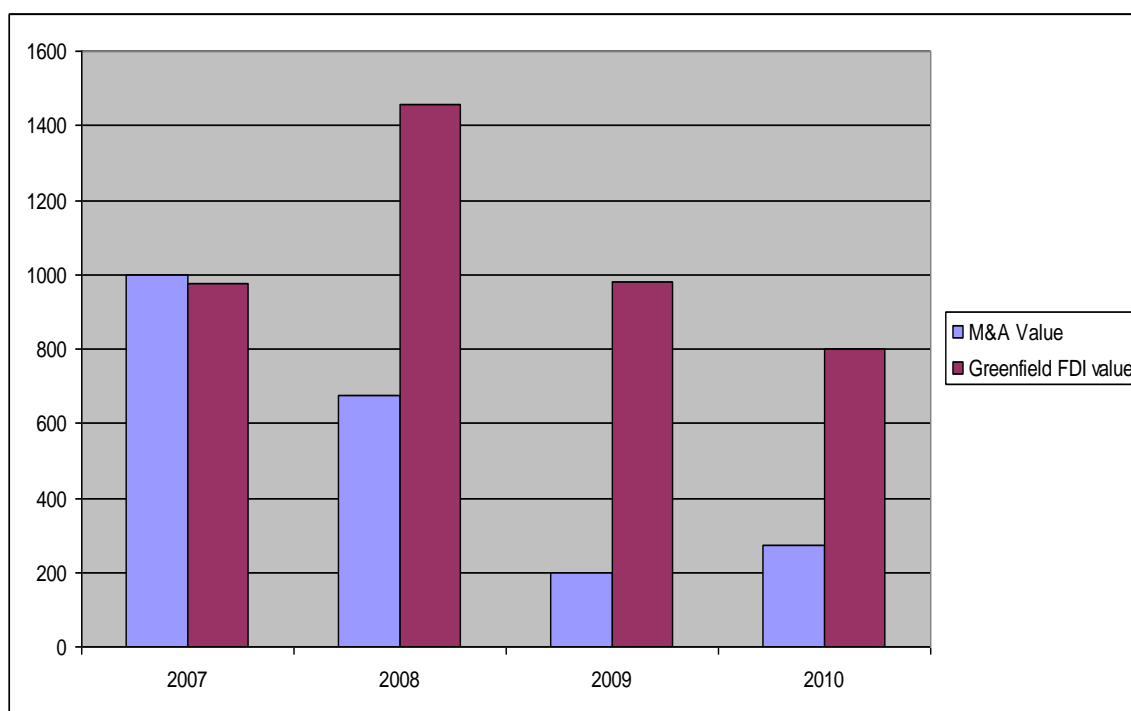
Figure 3: Greenfield Vs Mergers and Acquisitions (*Source*: UNCTAD, based on UNCTAD cross-border M&A database and information from the *Financial Timesv* Ltd, FDI Markets

Note: Data for value of Greenfield FDI projects refer to estimated amounts of capital investment.

1.2 Policy environment of SESEA in brief

The People's Republic of China (PRC) and East/Southeast Asian countries have made rapid enhancement in their macroeconomic situations, investment, exports and employment over the decade of 1980s and 1990s through the use of large amounts of Foreign Direct Investment. Similarly private capital, which was long seen with concern and suspicion, is now regarded as source of investment macro-economic growth in South Asia. Like other developing countries, South Asian economies focus their investment incentives exclusively on foreign firms. Over the last twenty years, market reforms, trade liberalization and intense competition for FDI have led to decreased restrictions on foreign investment and expanded the scope for FDI in most sectors. However, the SAARC countries have been largely unsuccessful in attracting FDI. These countries, jointly and also individually, receive low FDI compared to PRC, Brazil, Singapore and other East/Southeast Asian countries. South Asia received the smallest FDI flows among developing Asian countries, accounting for around <u>3%</u> of the total FDI inflows to developing countries in the region. All the countries in the South Asian region except India have received very little attention and negligible FDI inflows has hampered accelerated growth in the region. South Asian policymakers realize that credible efforts for economic reforms in South Asia must involve an upgrading of technology, scale of production and linkages to an increasingly integrated globalise production system chiefly through the participation of Multi National Corporations (MNCs). South Asian countries have many advantages to offer to keen investors, including:

- A sustainable future economic growth,

- Low inflation,

- Large Domestic Markets

- Scores of skilled personnel,

- A Growing entrepreneurial class

In addition to this, the constantly improving financial systems, benefits the rapid growth in the capital markets making it an attractive destination for potential investors. Incentives and promoting policy to harness FDI in several wways wo;; be in the minds of investos in the region which will enhance the location attractiveness (Sahoor, 2006)

Till the late 1960s, most of the developing economies, including those in East Asia, followed closed macroeconomic policies with "import substitution/ industrialization policies, under which self-reliance and indigenous efforts were encouraged". In conjunction the state, improved the development policy stance more extensively. These import substitution strategies, coupled with the large public sectors, resulted in uncompetitive practices in production resulted in negative rent seeking activities and slowed industry (Bhagawati and Srinivasan, 1975). Therefore, the paradigm shifted and as remedy export-led industrialization was advocated to make the production process more efficient and competitive. However this did now flourish as this built a school arguing against export-oriented growth theory (Bhagawati and Srinivasan, 1975 and Kruger, 1975), and the success of East Asian countries with higher exports and economic

growth during the 1970-1990, where most of the South Asian countries started opening up the policy. These reforms has resulted in investment flourishing in the region while also harnessing an investment environment conducive for foreign investment especially after the sluggish growth rates experienced in the last few decades (Sahoor, 2006).

In the SESEA inflows rose in the region by 24% in 2010, reaching $300 Bn, as a result of economic growth, good macro-economic fundamentals and higher commodity prices spurred FDI, figure 4 depicts FDI inflows to the developing economies in the region and it is clear that most FDI flows are flowing to SESEA countries(UNCTAD, 2011).

Figure 4: FDi inflows to developing and transition economies, by region, average of 2005-2007 and 2008 to 2010 (*Source*: UNCTAD, FDI/TNC database (www.unctad.org/fdistatistics).

1.3 Current trends in the SESEA

Table D. Cross-border M&As by industry, 2009–2010 (Millions of dollars)

Service Industry	Sales		Purchases	
	2,009	2,010	2,009	2,010
Total	34,748	32,089	40,467	93,521
Primary	1,597	428	12,962	23,948
Agriculture, hunting, fo	4	180	(54)	72
Mining, quarrying and	1,593	(608)	13,016	23,875
Manufacturing	17,084	17,806	2,798	8,612
Food, beverages and t	3,298	2,896	(142)	4,152
Textiles, clothing and l	86	367	235	981
Coke, petroleum produ	2,212	265	-	1,299
Chemicals and chemi	1,038	5,950	154	1,361
Rubber and plastic pro	14	460	35	35
Metals and metal prod	(351)	1,557	958	(557)
Machinery and equipm	1,119	300	531	(127)
Electrical and electroni	9,441	918	(767)	(499)
Motor vehicles and oth	88	4,201	206	2,000
Services	16,067	14,711	24,707	60,761
Electricity, gas and wat	2,241	408	7,673	1,048
Trade	2,609	239	2,273	1,765
Hotels and restaurants	(3)	138	262	1,144
Transport, storage and	5,758	2,165	(3,639)	13,768
Finance	2,839	1,650	17,876	39,271
Business services	2,532	4,837	947	138
Health and social serv	(236)	3,330	41	3,101

(UNCTAD, 2011)

Table D. Cross-border M&As by industry, 2009–2010 (Millions of dollars)

Region/ Country	Sales		Purchases	
	2,009	2,010	2,009	2,010
World	34,748	32,089	40,467	95,521
Developed economies	11,320	14,936	19,966	42,661
EU	1,031	1,446	2,875	18,594
US	3,985	5,780	1,014	8,329
Australia	206	910	3,529	9,383
Japan	5,473	4,840	350	625
Developing economies	23,195	16,223	18,796	50,816
Africa	102	302	105	11,421
Latin America and the Carribean	374	(618)	1,018	19,935
South America	-	39	981	19,353
Central America	246	9	-	25
Asia	22,497	16,539	17,649	19,284
West Asia	5,005	(2,143)	158	602
South, East and South-East Asia	17,491	18,662	17,491	18,862
China	4,519	7,024	9,333	2,536
Hong Kong, China	7,746	1,790	2,403	8,924
Korea	276	3,536	243	(318)
Malaysia	2,637	1,061	323	2,119
Singapore	2,482	3,192	4,940	4,448
South East Europe and CIS	13	-	1,708	44
Kazakistan	-	-	1,359	24
Russian Federation	13	-	347	16

Figure 5 : Various Tables and Graphs (Source UNCTAD, 2011)

In 2010, FDI inflows to the SESEA increased by 24%, to $300 Bn (Figure A of Figure 1). inflows to the ASEAN countries depicted 200% growth; those to "China and Hong Kong (China) enjoyed double-digit growth; while those to India, the Republic of Korea and Taiwan Province of China showed decline" (table B of figure xx). FDI to South east Asia

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increased to $79 billion in 2010 breaking 2007's previous record of $76 billion recorded at pre-crisis level times. The boost was driven by large magnitude of FDI inflows to "Malaysia (537 per cent), Indonesia (173 per cent) and Singapore (153 per cent) (table A figure xx)". Positive policy at country level fuelled good performance within SESEA region, and seem likely to continue to do so: in 2010, Cambodia, Philippines and Indonesia Saw liberalization in industry while it improved FDI-related administrative environment(mainly its administrative procedures (UNCTAD, 2011).

- Singapore the global financial centre (regional hub of TNC headquarters) has received great investment as a result of a developing new Asia, this accounted for half of ASEAN's FDI, which recorded FDI levels of $39 billion in 2010. However due to rising production costs in China, has resulted in Indonesia and Vietnam taking a new role as low cost production centres (UNCTAD, 2011).

- Growing FDI inflows to Hong Kong (China)(32 per cent) and China (11 per cent) (table A) saw. FDI in the East Asian region as a result rose to $ 188 Billion. Benefited greatly from its ties with the Chinese mainland, Hong Kong (China) quickly withstood global financial crisis and its associated shocks, and as a result FDI inflows recorded new heights reaching $69 billion in 2010.

- China saw rising costs with production costs and wages increasing, thus the well-known off-shoring of low-cost manufacturing to beneficiary countries slowed down which increased divestments in the coastal areas.

- FDI to *South Asia* fell to $32 billion, indicating a 31 per cent dip in inflows to India While Pakistan saw 14 percent fall , the largest inheritors of FDI in the subcontinent. In India, Plans to boost FDI such as the planned $1.5 trillion

investment in infrastructure between 2007 and 2017 has been set back as due to macroeconomic concerns, such as a high current account deficit and inflation, as well as to delays in the approval of such FDI projects. Bangladesh has been a keen light becoming the regions new low-cost production center of the region, Inflows to the country rose to $ 913 Million

- Cross border M&A in SESEA fell to $32 Billion in 2010. If we consider M & A by segement "Within manufacturing, the value of deals increased while industries such as chemical products ($6.0 billion), motor vehicles ($4.2 billion) and metal products ($1.6 billion), but dropped in industries such as food and beverages ($2.9 billion) and electronics ($920 million) (figure 5 table D). Greenfield investment remained steady in 2010, after a major delays in economic development due to widespread divestments and project cancellations in 2009 "(UNCTAD, 2011)

- FDI inflows to the SESEA are growth enhancing while promoting the right impotence needed for economies.. The competitiveness of SESEA countries in being a hub for low-Cost of production will be strengthened. As a result further FDI increases can be expected. Prospects for inflows to the LDCs in the region are promising, thanks to intensified South-South economic cooperation, fortified by surging intraregional FDI. "Indeed, countries in the region have made significant progress in their regional economic integration efforts (within Greater China, and between China and ASEAN, for example), which will translate into a more favourable investment climate for intraregional FDI flows". (UNCTAD, 2011)

Chapter 2: A review of Theory and Literature

The literature consists of a multitude of research, therefore to create sound policy paradigms, initially the literature will identify theories related to FDI including ,the micro-level theories of FDI comprising of pro & anti FDI views while the Macro-Economic theory will take in to account Dunnings eclectic paradigm and considers the variables selections from Benchmark Global Indicators on FDI performance.

2.1 Theories of FDI

The micro-level theories of determinants of FDI try to provide answer the questions why multinational companies prefer opening subsidiaries in foreign countries rather than exporting or licensing their products, how MNCs choose their investment locations and why they invest where they do. The macro-level determinants deal with the host countries situations that determine the inflow of FDI.

2.1.1 Micro-level Theories of FDI

A variety of theories have been put forward including Neo classical Theory , portfolio theory, Internationalisation theory & product life cycle theory to name a few. However for the building of an index appropriate for investors to ascertain determinants the Pro FDI view and Dunnings Eclectic Paradigm has been given importance in this section as it will be the base theories for this dissertation.

2.1.1.1 Pro-FDI Views

LDC suffer from a variety of constrains including the lack of financial & managerial capital, the scarcity of technological skills and the widening gap between the rate of investment to the level of savings to induce economic growth. Therefore FDI can channel this through TNC who bring mentioned capital, technology and management to the country (Todaro, 1992; Woldemeskel, 2008).

The total amount of foreign exchange that can be obtained from export and net public foreign aid falls short of foreign exchange that is required by LDCS. FDI can help to fill this gap by reducing part or the entire deficit in the balance-of-payments. Moreover, MNC's manufacturing products can be exported are able to generate positive export earnings . furthermore host country government enjoy this as taxable income increases(Todaro, 1992) (Woldemeskel, 2008). FDI can also play important role by creating employment opportunities and by integrating the host-country economy in to the world economy (OECD, Foreign Direct Investment for Development: Maximizing benefits and minimizing costs, 2002)

2.1.1. 2 Anti-FDI Views

The first counter argument says that MNCs increase income for low income segments, which have low inclination to save. If individuals do not save enough, the gap between savings and investments cannot be met. Besides, foreign firms may also fail to reinvest the profit they generate in the host country; hamper the growth of domestic enterprises and domestic investment by importing the input and intermediate product from their subsidiaries in other countries. FDI show characteristics for the development of home-

grown skills as the result of MNCs dominance over local enterprises (Todaro, 1992; Woldemeskel, 2008).

FDI from foreign firms improves the current/ capital account of the host country. In the long run, , repatriation of profit, interest, substantial import of intermediate, capital goods, management fees and royalties may detrimentally affect the foreign exchange position of the host country (OECD, 2002; Woldemeskel, 2008).

TNC's contribute to bridge the gap between locally collected tax revenue with their targeted revenue. However, governments often enter in to exclusive agreements with foreign firms and provide tariff protections, tax holidays and investment allowances. Due to these reasons, the taxes that can be collected become quite small. Moreover, these firms can avoid local taxation by transfer pricing techniques -a method used to reduce local profit level by paying artificially inflated prices to the intermediate products purchased from abroad subsidiaries (Lindert, 2000); Woldemeskel, 2008).

2.2 The Eclectic Theory of FDI

John Dunning developed an eclectic theory of FDI, which is called *OLI paradigm.* O, L and I refer ownership advantage, location advantage and internalization conditions, respectively. Operating in a foreign market has many costs and one such cost is the "costs of foreignness" include a failure of knowledge about local market conditions or cultural or legal or many other costs. Therefore, foreign firms should have some advantages that can offset these costs. Ownership advantage is a firm specific advantage that gives power to firms over their competitors. This includes advantage in management techniques, technology, easy access to finance, economies of scale and capacity to coordinate

activities. Unlike ownership advantages, location advantages are country specific advantages. Transnational Companies (TNCs) in order to fully reap the benefit of firm specific advantages, they should consider the location advantage of the host country. This includes accessibility and low cost of natural resource, adequate infrastructure, political and macroeconomic stability. As a consequence, the location advantage of the host country is one essential factor that determines the investment decision of TNCs. Internalization is multinational companies' ability to internalize some activities to protect their exclusive right on tangible and intangible assets, and defend their competitive advantage from rival firms. Accordingly, all the said conditions must be fullfiled prior to any TNC open a subsidiary in a foreign country (Soderstein (1992), Laar(2004)).

2.3 Motives of FDI

Assefa and Haile (2006) assert that the ownership and internalization advantages as developed in Dunning (1993) eclectic theory are firm specific advantages, while location advantages are regarded as host country qualities. Firms choose locations where all these advantages can be combined together to advance the firms' long-term profitability. Asiedu (2002) and Dunning (1993) distinguish the motives of FDI as either market seeking or non-market seeking (efficiency and resource seeking). According to Dunning (1993), a market seeking FDI is that which aims at serving the domestic and regional markets. This means that goods and services are produced in the host country, sold and distributed in the domestic or regional market (Asiedu, 2002). This kind of FDI is

therefore, driven by host country characteristics such as market size, income levels and growth potential of the host market and so on. A non-market seeking FDI can either be classified as resource/asset seeking and/or efficiency seeking. Resource seeking FDI aims at acquiring resources that may not be available in the country of origin.

Such resources may comprise natural resources, availability and productivity of both skilled and unskilled labour forces as well as availability of raw materials. Efficiency seeking FDI aims at reducing the overall cost of factors of production especially when the firm's activities are geographically scattered (Dunning, 1993). This allows the firm to exploit scale and scope economies as well as diversify risks. Apart from the economic factors that are believed to be the major motivation for FDI, the host country's FDI policy also plays a major role in attracting or deterring FDI. This therefore, suggests a need for the host country to develop policies that provide a conducive environment for business if the authorities believe in the benefits of FDI. This necessitates a regular monitoring of the activities of TNCs and an acceptance by the host government that, if FDI is to make its best contribution, policies that were appropriate in the absence of FDI may require amendments in its presence. For example, macroeconomic policies may need to be altered in order to provide a favourable climate for FDI. Stronger competition as a result of FDI may also induce a host government to operate an effective and efficient competition   policy.

FDI classification	Host country fdi policy	Business facilitation	market seeking	resource seeking	asset seeking	effi. Seek
Factors	Economic/political/social stability	Investment Incentives	GDP size, growth, per capita	Raw Materials	Skilled labor	GFCF
	entry and exit rules	Hassle costs	Openess/access to markets		Technology and Innovation	input Cost
	standards of treatment	Social amenities			Infrastructure	
	Market structure/competition/M&A policy					
	Trade policy and FDI (Coherence)					
	tax policy and International agreements					

Figure 6: Motives of FDI classification

2.4 Common Macro-economic determinants of FDI

Numerous push and pull-side of determinants of FDI has been identified. Push side factors include internalization, economies of scale, intangible assets, product life cycle, oligopoly reaction an to name a few. Examples of pull-side determinants are GDP or Market size, technology standing, growth, labour cost, competition levels, infrastructure, cultural, political and legal environment, government policy, and so forth. Empirical studies by Lim (1983) and Tonisi (1985) have demonstrated the crucial importance of pull-side factors in determining FDI (Wang, Clegg, & Kafouros, 2011). However many authors have identified many variables with variety of views on their effect on country or region. However to narrow down the variables to ascertain the best variables for the study The world Investment Report 2011 depicted in the introduction is a global conference on trade and development Have indexes using the best chosen variables by authors and policymakers.

The mentioned determinants are known as "traditional determinants", but globalization process changing the dynamics related to location determinants (UNCTAD, 1996). The theoretical argument for explaining these changes is that technological know-how, increasing open policy to trade, FDI based technology inflows and the addition of the completion factor on firms, would result in a reformation of the strategies utilized by TNCs objectives (especially resources-, markets- and efficiency-seeking FDI. The two possible consequences on the location determinants are: first, host countries would be assessed by TNCs on the basis of a wider set of variables than before; and, second, the relative importance of FDI determinants would be rebalanced giving weight to each

determinant and to assess its impact on a short and long term perspective. Although the "traditional" economic determinants and the type of FDI associated with these would not disappear, their relevance is likely to decrease, giving a greater weight to the determinants related to efficiency-seeking and created assets-seeking FDI (UNCTAD, 2011) Since the Authors Aim is to create an index that close replicates the UNCTAD's IIOFPI index. The paper adopts Dunning's eclectic paradigm which encompasses OLI paradigm theoretical framework. This paradigm encompasses, as location advantages, a wide range of factors, including those related to policies regulating FDI (and policies that affect FDI indirectly), those of an economic nature, and those related to the "climate" in which foreign investors operate in host countries.

Dunning (1993) provides avariety of factors classified as FDI determinates. In *WIPs* (UNCTAD, 1998a and 2001), these same factors are included, ordered according to the main objectives that transnational are those related **to resources-seeking and market-seeking FDI** (in the case of the least developed countries) such as GDP, income per capita, labour costs, etc (Carlos Rodríguez, 2009; (UNCTAD, 2011).

These are "traditional" determinants, but the current globalization process is likely to induce important changes to location determinants (UNCTAD, 1996). Though that these "traditional" economic determinants and the type of FDI associated with these would not fade away, their relevance is likely to diminish, giving a greater weight to **the determinants related to efficiency-seeking and created assets-seeking FDI is interpreted by UNCTAD as a sign that institutional characteristics of the countries have a positive influence on FDI inflows** (Carlos Rodríguez, 2009)

The United Nations Conference on Trade and Development has developed several indices to evaluate and compare the location advantages of the countries and their relative success in attracting FDI. Some of the indices include Improved Inward FDI Potential Index (IIFPOI), Inward FDI Potential Index of UNCTAD for 140 countries (IFPOIUN140), Inward FDI Potential Index of UNCTAD, re-caluclated for the 49 countries in our sample (IFPOIUN49), Reverse ranking of the Competitiveness Index of Global Competitiveness Report (GCR), World Competitiveness Yearbook (WCY) Index and Economic Freedom Index (ECFREE). However, these indices suffer from several limitations but it has been used as a benchmark for assessing policy in relation to FDI and it posses as a severe limitation. Therefore Carlos Et.al constructed an improved inward FDI potential index that can solve some of those limitations, making use of 70 variables for 49 countries and data reduction techniques. The correlation analysis shows that it fits better with the Inward FDI Performance Index, and thus this new index explains more precisely countries' FDI inflows. Moreover, the larger number of variables included allows us to rank the countries for different kinds of FDI and to assess countries' strengths and weaknesses for policy purposes. Furthermore the Index uses not only variables from model but also encompasses a variety of theoretical literature. In fact as per Carlos Rodríguez, 2009 "the choice of the variables included in IIFPOI is justified by the following criteria: the theoretical analysis of the determinants of FDI; the empirical studies testing the validity of the theoretical analysis; the availability of quantitative data on the potential determinant factors and their geographic scope; and finally, the correlation between these criteria and IIFPI"

Since the aim of this index is to be a useful tool for analysing the relative advantages of countries for FDI inflows, we adopt Dunning's eclectic paradigm as theoretical framework while also recognising the pro view of FDI. The paradigm can be classified according to Host Country FDI policy, business facilitation, market seeking, resource seeking, asset seeking and efficiency seeking. This is known to portray to the investor the "climate" in which they. The synthesis of all the literature at present however at present to market-seeking and resources-seeking FDI (in the case of the less developed countries) such as GDP, income per capita, labour costs, etc (Carlos Rodríguez, 2009)

2.5 Variable selection

Table 2: Classification of the factors

FDI classification	Host country fdi policy	Business facilitation	market seeking	resource seeking	asset seeking	effi. Seek
Factors	Economic/political/social stability	Investment Incentives	GDP size, growth, per capita	Raw Materials	Skilled labor	GFCF
	entry and exit rules	Hassle costs	Openess/access to markets		Technology and Innovation	input Cost
	standards of treatment	Social amenities			Infrastructure	
	Market structure/competition/M&A policy					
	Trade policy and FDI (Coherence)					
	tax policy and International agreements					

Figure 7: classification of the factors

Based on the classification the variables can be reclassified as follows:

The variables

The list of variables and their proxies are listed in Table 2. The changes in the variables are computed as a measure of the variables in order to avoid spurious analysis of results. Furthermore the UNCTAD improvement index has classified the variables as per several factors and models including Host country FDI policy, Economic Determinants of FDI, Business facilitation of FDI, Market Seeking FDI, Efficiency seeking FDI, Resource Seeking FDI and Asset seeking FDI and a colour coated table has been listed below. These have been classified based on Carlos et.al article and listed below:

2.5.1 Dependent Variable and independent variables

The dependent vatibale used is Foreign Direct Investment (Current US$) the other 70 variables listed below are the independent variables:

	Location determinants	Meaning Measurement	Measurement
CCR	composite country rank	composite country rank	ICRG
MEII	Macro-economic enviroment	Macro-economic enviroment	GCR
PS	Risk of Political stability	Risk of Political stability	IMD
ERS	Exchange rates	Exchange rates	IMD
SD	Sustainable development	Sustainable development	IMD
AFC	Protectionism	Protectionism	GCR
RFCT	Finance and Banking regulation	Finance and Banking regulation	IMD

PSC	Public sector contracts sheet	Public sector contracts sheet	IMD or UNCTAD
MA	Number of M&As	Number of mergers and acquisitions	IMD
Greenfield	Number of Greenfield investments	Number of Greenfield investments	IMD
CBV	Venture capital	Venture capital	IMD
FI	Foreign investors	Foreign investors	IMD
FFI	% of foreign companies	% of foreign companies	IMD
ACM	capital markets	capital markets	IMD
FC	Investment incentive	Investment incentive	IMD
IPS	Investment protection scheme	Investment protection scheme	World Bank
PA	Number of patents in	Number of patents in	World Bank

	force	force	
CL	Taxes on international trade (% of revenue)	Taxes on international trade (% of revenue)	WDI
MTR	Tariff rate, applied, simple mean, all products (%)	Tariff rate, applied, simple mean, all products (%)	WDI
VTR	Simple mean differeed from most favoured nation	Simple mean differeed from most favoured nation	World Bank
HIB	Tariff Bariers	Tariff Bariers	IMD
COI	Customs and other import duties (% of tax revenue)	Customs and other import duties (% of tax revenue)	World Bank
BIT	Billateral investment treaties	Billateral investment treaties	UNCTAD
DTT	Corporate Tax rate	Corporate Tax rate	World bank

CTR	Investment incentives sheet 6	Investment incentives sheet 6	ICRG
Ii	Subsidies and other transfers (% of expense)	Subsidies and other transfers (% of expense)	IMD
GS	Control of Corruption	Control of Corruption	GCR
CC	Bribing and corruption sheet 6	Bribing and corruption sheet 6	World Bank
BC	Bureaucracy	Bureaucracy	ICRG
EODB	Ease of Doing a business	Time required to start a business (days)	World Bank
GB	Government Beuracracy	Government Beuracracy	IMD
TRSB	Ease of Doing Business Index	Ease of Doing Business Index	IMD
QL	Quality of life sheet 8	Quality of life sheet 8	IMD

GDPgrowth	GDP growth	GDP growth	World Bank
GDPpercapita	GDP per capita	GDP per capita	World Bank
WFDIS	% of World FDI stock	% of World FDI stock	IMD
IIWRB	% of merchant exports by region	% of merchant exports by region	World Bank
TE	Total Exports Current	Total Exports Current	World Bank
NR	% of world total	% of world total	UNCTAD
LR	Labour regulations sheet 7	Labour regulations sheet 7	IMD
UCL	Unit labour cost	Unit labour cost	IMD
CB	Collective Bargaining	Collective bargaining	IMD
SL	Skilled labour sheet 7	Skilled labour sheet 7	IMD
FHSKL	Foreign high skilled people sheet 7	Foreign high skilled people sheet 7	IMD

Omar Sheriff

Its	Information technology skills sheet 8	Information technology skills sheet 8	World Bank
Sse	Secondary school enrolment % sheet 8	Secondary school enrolment % sheet 8	World Bank
Set	School enrollment, tertiary (% gross)	School enrolment, tertiary (% gross)	IMD
RD	Research and development expenditure (% of GDP)	Research and development expenditure (% of GDP)	IMD
Patent	Patents granted to residents sheet 8	Patents granted to residents sheet 8	GCR
Patentforce	number of patents in force sheet 8	number of patents in force sheet 8	IMD
Tech	Technological readiness	Technological readiness	IMD
Roads	roads sheet 8	roads sheet 8	IMD

railraods	railroads sheet 8	railroads sheet 8	IMD
QofAIR	quality of air transportation sheet 8	quality of air transportation sheet 8	IMD
Water transportation	water transportation sheet 8	water transportation sheet 8	World Bank
DISB	Distribution infrastructure sheet 8	Distribution infrastructure sheet 8	World Bank
Telephone	Telephone lines	Telephone lines	World Bank
mobile	Mobile cellular subscriptions	Mobile cellular subscriptions	
OP	Productivity	Productivity	IMD
Energy use percapita	GDP per unit of energy use (PPP $ per kg of oil equivalent)	GDP per unit of energy use (PPP $ per kg of oil equivalent)	
GFCF	Gross fixed capital formation	Gross fixed capital formation	IMD

fixedtelephone	fixed telphone tarrifs sheet 7	fixed telphone tarrifs sheet 7	World Bank
electricacosts	Electrical costs for industrial clients sheet	Electrical costs for industrial clients sheet	IMD
Adequecyofcomm	Communications technology sheet 7	Communications technology sheet 7	IMD
Energyuse	Energy use (kt of oil equivalent)	Energy use (kt of oil equivalent)	IMD
COL	Cost of living index sheet 5	Cost of living index sheet 5	World Bank
Apartment	Apartment rent sheet 5	Apartment rent sheet 5	World Bank
Office	Office rent sheet 5	Office rent sheet	IMD
Exports of services	Exports of goods and services (current US$)	Exports of goods and services (current US$)	World Bank

	Imports of ICT (Current US$)	Imports of ICT (Current US$)	World Bank
Imports of ICT			

IMD= International Market Database, ICRG, International Country Risk guide, GCR-Global Competitiveness report, WDI=World Development Indicators, UNCTAD= United Nations Commerce Trade and Development and world bank database

Table 1:IIOFPI variables ascertained for model creation (Carlos et.al, 2009)

2.6 Variable classifications, definitions and expected outcome as per literature

In the tables found below, we summarize other studies on the determinants of FDI, measurement used for this study and the database of information derivation. It provides all the expected signs (+ or -) from literature as the author is shows as well. It shows that research is finding a diverse set of determinants as new developments in the global economy take place and data availability and econometric techniques evolve. In sum, the findings in the vast empirical literature regarding location determinants justify our approach to include the largest possible number of variables related to the location determinants in constructing our improved index, IIFPOI. All in all, and despite some mixed results regarding some variables, empirical studies FDI potential index is an efficient study to understand the business environment from a variety of angles (Carlos Rodríguez, 2009)

Determinants	positive	Negative	No change
CCR	ADB		
MEII	Sahoo, , CHEONG		
RS	Kria et.al		
ERS	Catherine et.al	Catherine et.al	Catherine et.al
SD			Kamal et.al
AFC	Boden et.al		
RFCT		Cheng et.al	
PSC	Europa	Euorpa	Europa
MA	Byrunet.al, Karvy, Park	Park	Park
Greenfield	Byrunet.al, Karvy, Park	Park	Park
CBV	Madhavan		
FI	Brealey and kaplanis	Patterson	
FFI	Brealey and kaplanis	Patterson	
ACM	Whillems et.al		
FC	Brealey and kaplanis	Patterson	
PS	Kawai, Emmanuel		
PA	Cheung and Lim		
CL	Olivera et.al		
MTR		Fathath et.al	
WTR		Fahath et.al	
HIB	Yanika, Raghavan	Raghavan	
COI			
BIT	Blonigen et.al	Blonigen et.al *	Blonigen et.al
OTT		Blonigen et.al *	
CTR		Park	
	dinga	Zhang	
GS	Sumei tang		
CC	Wei		
BC		Wei, Zhou	
EDOB	Haozhen Zhang		
GB	Busse and hesseker	Duanamu	
TRSB		Paulio jolio	
QL	Wang et.al		
GDPgrowth	UNCTAD, Nunerkamp		
GDPpercap	UNCTAD, Nunerkamp		
WFDIS	Sethi et.al		
WRB	Aseidu, Sahoo, Holland et.al		
TE	Hake et.al	Thi hang ham	
NR	UNCTAD,Pradhan and Saha, Aseidu,	Kinoshita	

	Determinants	positive	Negative	No change
39	LR		Sarna, brown	
40	UCL	Owen	Flam	
41	CS		UNCTAD	
42	SL	Reich et.al,		
43	FHSKL	Euro. Commsion		
44	IS	Euro. Commsion		
45	ESE	Marcell	Walsh J	
46	eet	Marcell	Walsh J	
47	RD		Nicolini and UNCTAD	
48	Patent		Cheung and Lim	
49	Patentforce		Cheung and Lim	
50	Tech	Kamath et.al		Kamath et.al
51	roads	Goodspeed, Bellak et.al		
52	railraods	Goodspeed, Bellak et.al		
53	QofAIR	Goodspeed, Bellak et.al		
54	watertransportation	Goodspeed, Bellak et.al		
55	DISB	Goodspeed, Bellak et.al		
56	Telephone	Goodspeed, Bellak et.al		
57	mobile	Goodspeed, Bellak et.al		
58	OP	berhofer and Pfaffermayr		
59	Energyusepercapita	Hellier et.al		
60	GFCF	Kumar and Pradhan*	Kumar and Pradhan	
61	fixedtelephone		Zurawiki	
62	electricacosts		Piyawati	
63	Adequecyofcomm	Addison and Hesamati, Piyawati		
64	Energyuse	Hellier et.al		
65	COL		UNCTAD	
66	Apartment		Piyawati	
67	Office		Piyawati	
68	ImportsofICT	Addison and Hesamati, Piyawati		
69	exportsofservices	Hake et.al	Thi hang ham	
70	FDI			

Table 2: Authors compilation of the expected outcomes of the variables based on previous studies

3.0 Material, methods of data collection and methodology

3.1 Research method

The researcher will use a mixed method of research where Qualitative research will be used to assess policies, trends in its core objectives as a FDI promotion mechanism, concern on trade policy and other qualitative orientations. While the quantitative methods will use the statistical data such as inflation, labour cost etc will be used to bring more meaning to the qualitative aspect and to also assist in creating the model for the report.

3.2 Research design

The study uses a descriptive case study design.

3.3 Sampling

3.3.1 Sampling Techniques

Sampling technique is a process of obtaining a sample of units or population to be included in the study. In this study a **simple random sampling method** will be used.

3.4 Population and area of study

The population of the study considers two ASEAN countries Malaysia & Indonesia, while India is considered from the SAARC countries while East Asia representation is from China. Panel data from 2000-2010 and will assess a variety of location determinants for FDI in south, east, and south-east Asia perspectives.

3.4.1 Sources of Data

The researcher's article will be using mainly quantitative data sources from the following:

- World bank Database

- The Global Market Information Database (GMID).

- UNCTAD reports

- Conference proceedings

3.4.2 Data Collection.

Types of data to be collected.

3.4.2.1 Primary data

No use of primary data.

3.4.2.2.Secondary data

The data will be gathered through the documentary review in which the various documents and data sets from archives & databases on information such as GDP, Growth rate, employment level, internationalization will be ascertained. In terms of the Journal articles peer reviewed and were from Academia that was recognized by the various chambers of Academia were ascertained for the study Then various time series of data from databases from the World bank, World Competitiveness Yearbook, International Market Database (IMD), International Country and many other reputes sources will be used ascertain findings regarding a country.

4.0 Methodology

The paper proposes to use a *partial least squares regression analysis* method where robustness of results and hypothesis are proven/disproven Correlations, coefficients and Model significance. Then Since many of the variables showed high correlation among them, mainly those belonging to the same type of determinants, a Principal Component Analysis was applied in an iterative manner and in a different order, depending on the economic sense of the extracted factors. The purpose of this analysis was to simplify the construction of the index, minimizing the number of variables to get least loss of information is essential(Carlos et.al, 2009). This data will be tested using various statistical packages such as XLSTAT. Furthermore to add professionalism in to the study, the variables ascertained were benchmarked based international recognised indicators that measures a countries FDI potential such as the GMID rankings and survey questionares.

Please see appendix A, B and C for depicting the methodology, procedure, relating to Partial least squares regression and Principal component analysis.

4.1 Selection of variables

The author of the report has merged the findings from both PLS and PCA and identification of the variables of significance was Possible. The PLS regression has a correlation matrix after the Varimax rotation; since the correlation matrix has been standardized it will best show the best results for the correlations. The correlations above 0.4 have been considered as significant variables. However the significance classification is not solely based on the PLS, in fact the PCA variable contribution has also been taken in to account. Weighting of the variables takes in to consideration the weight of the sub indices and suggested in the methodology section. Therefore variable classification had been classified as high, medium, low and very low significance and the determinant rules have been classified. However due to word limitation the report will only consider variables with high to medium significance.

	PLS Correlation	PCA Contribution
High	above 0.4	Above 1.4
Medium	Above 0.4	0.7-1.4
	below 0.4	Above 1.4
low	above 0.4	Below 0.7
very low	Below 0.4	Below 0.7

Table 4: Authors rules regarding variable selection criteria (+ or -)

5.0 Results

5.1 Model significance

Below in table 5 summarises the significance of the model and its predictive capability. The table shows that most R square values and q square values depict scores above 85% for all countries and since the level of computations are always below 5, it shows the PLS model has strong explanatory power and the quality of fit of the model is good for interpretation. Also in Table 5 depicts cronbar alpha values above 80% depicting that there is low redundancy among the variables and the overall data seems to be correlated and is a good estimation for FDI for all countries. All Bartlett scores were less than 0.0001 showing high model significance and depicts that the data is not from an identity matrix, hence can be factorised for PCA. (XLSTAT, 2013)

	Partial Least Squares Regression		**Principal component analysis**		
Country	**R square**	**Q square**	**Cronbar Alpha**	**Bartleet test**	
China	98.8	83.9 (3 computations)	84.2	< 0.0001	
India	99.7	92.5 (4 computations)	90.8	< 0.0001	
Indonesia	101.5	97.3 (4 computations)	90.6	< 0.0001	
Malaysia	101.5	94.8 (4 computations)	84.2	< 0.0001	

Table 3: Summaries of Model Significance for all countries in Sample

For more detailed explanation of the model significance; please see appendix E to F for Model significance both for PCA and PLS for China, India, Indonesia and Malaysia respectively.

A partial least squares regression following the equation below:

$$
\begin{aligned}
nFDI =\ & \alpha + \beta 1 * CCR + 2 * MEII + \beta 3 * PS + \beta 4 * ERS + \beta 5 * SD + \beta 6 * AFC + \beta 7 * RFCT + \beta 8 \\
& * PSC + \beta 9 * MA + \beta 10 * Greenfield + \beta 11 * CBV + \beta 12 * FI + \beta 13 * FFI + \beta 14 \\
& * ACM + \beta 15 * IPS + \beta 16 * CL + \beta 17 * MTR + \beta 18 * VTR + \beta 19 * HIB + \beta 20 * COI \\
& + \beta 21 * BIT + \beta 22 * DTT + \beta 23 * CTR + \beta 24 * ii + \beta 25 * GS + \beta 26 * CC + \beta 27 \\
& * BC + \beta 28 * AONB + \beta 29 * GB + \beta 30 * TRSB + \beta 31 * QL + \beta 32 * GDPgrowth \\
& + \beta 33 * GDPpercapita + \beta 34 * WFDIS + \beta 35 * IIWRB + \beta 36 * TE + \beta 37 * NR \\
& + \beta 38 * LR + \beta 39 * UCL + \beta 40 * SL + \beta 41 * its + \beta 42 * sse + \beta 43 * set + \beta 44 * RD \\
& + \beta 45 * Patent + \beta 46 * Patentforce + \beta 47 * Tech + \beta 48 * roads + \beta 49 * railraods \\
& + \beta 50 * QofAIR + \beta 51 * watertransportation + \beta 52 * DISB + \beta 53 * Telephone \\
& + \beta 54 * mobile + \beta 55 * OP + \beta 56 * Energyusepercapita + \beta 57 * GFCF + \beta 58 \\
& * fixedtelephone + \beta 59 * electricacosts + \beta 60 * Adequecyofcomm + \beta 61 \\
& * Energyuse + \beta 62 * COL + \beta 62 * Apartment + \beta 63 * Office + \beta 64 \\
& * Importsofautomobile + \beta 64 * importsofservices + \beta 65 * FC + \beta 66 * PA \\
& + \beta 67\ CB + \beta 68 * CB + \beta 69 * GS
\end{aligned}
$$

Please note the 70 variables used for the above equation its Abbreviations & factor classifications from CCR(Composite Country Risk) to GS (government Subsidies), measurements used for the study, expected outcomes from previous literature and the ex related to the study have been defined in section 2 of this report. This was input in to Xlstat and the findings will be shown in the next section of the report.

5.2 Variable selection using Authors

Determinants	China	India	Indoenesia\	Malaysia		Determinants	China	India	Indoenesia\	Malaysia
CCR	Medium	low	low	medium	39	LR	medium	low	low	medium
MEII	Medium	high	high	low	40	UCL	medium	high	low	medium
PS	high	low	low	high	41	CB	very low	low	low	high
ERS	low	high	high	High	42	SL	very low	medium	medium	medium
SD	low	medium	low	medium	43	FHSKL	very low	low	high	medium
AFC	Low	high	low	medium	44	fls	Medium	high	low	high
RFCT	low	medium	medium	high	45	sse	Medium	very low	low	low
PSC	high	low	low	medium	46	set	low	very low	low	low
MA	high	low	high	medium	47	RD	medium	Low	low	medium
Greenfield	low	low	medium	low	48	Patent	low	Low	low	low
CBV	very low	medium	low	medium	49	Patentforce	medium	Low	high	low
FI	medium	medium	high	medium	50	Tech	high	Low	high	low
FFI	low	medium	high	medium	51	roads	medium	very low	low	low
ACM	very low	medium	medium	low	52	railraods	low	very low	low	low
FC	very low	n/a	high	medium	53	QofAIR	low	medium	low	low
IPS	low	low	medium	low	54	watertransportation	very low	medium	high	medium
PA	very low	very low	low	low	55	DISB	Medium	high	medium	medium
CL	high	medium	high	low	56	Telephone	high	medium	medium	low
MTR	medium	medium	high	low	57	mobile	low	high	medium	low
VTR	low	very low	high	low	58	OP	low	Low	high	low
HIB	low	very low	low	low	59	Energyusepercapita	Medium	Low	high	low
COI	medium	very low	medium	low	60	GFCF	very low	very low	low	low
BIT	very low	very low	low	medium	61	fixedtelephone	high	Low	high	medium
DTT	Medium	medium	low	medium	62	electricacosts	low	High	high	low
CTR	high	high	low	high	63	Adequecyofcomm	low	Low	high	medium
II	medium	medium	medium	high	64	Energyuse	Medium	medium	N/A	low
GS	medium	high	low	low	65	COL	high	medium	low	low
CC	medium	very low	medium	low	66	Apartment	low	Very low	low	low
BC	very low	very low	low	medium	67	Office	low	Low	low	low
EDOB	low	medium	medium	low	68	ImportsofICT	medium	Low	medium	low
GB	medium	medium	low	medium	69	exportsofservices	high	high	low	low
TRSB	medium	high	N/A	N/A	70	FDI				
QL	high	high	medium	medium						
GDPgrowth	high	medium	high	high						
GDPpercap	high	high	medium	low						
WFDIS	high	very low	high	medium						
IIWRB	medium	low	medium	N/A						
TE	medium	low	medium	low						
NR	high	low	low	medium						

Table 4: Summary of PLS/PCA findings based on Authors rules

5.3 FDI determinants related to Economic, Political and Social Stability

- CCR depicted medium positive significance, recoding low correlations in both China & Malaysia while high contributions of 2.0 % in China and 2.388% in Malaysia were recorded which created a medium positive significance. In order to create an atmosphere of an FDI friendly environment the countries mentioned should improve its CCR score by sustained stable macroeconomic policies, upgrading the country's risk profile followed by cost related and investment environment related factors. Therefore as per the research the better the **CCR score the larger the FDI flows** in which a **positive relationship is generally expected and both countries** (Majeed et.al, 2009). Majeed et.al who conducted a combination of VAR, granger causality tests, forecasting and three stage OLS regression from panel data from 1970-2007 (In Pakistan), found relationship similar to the above findings, where he states that the country has to improve its country risk profile accompanied by cost factors and other common Macro-economic variables to improve the environment related to FDI. However based on accumulated CCR scores Malaysia depicted an accumulated rank of 41st compared to China's 91st position as of 2010 (based on the data from the PRS group). China shows weak positions in relation to CCR variables such as voice and accountability, regulatory quality and control of corruption compared to that of Malaysia but receives more FDI than Malaysia. It has to be remembered that PLS and PCA contributions just indicate the relationship that is unique to that country. A variety of other factors in China compared to Malaysia contribute to larger FDI flows in China and CCR in itself does not only contribute to the variation in the flows of FDI between the countries. However China should Improve its

FDI environment by improving the mentioned factors above and Malaysia should continue to improve its CCR score to increase probable FDI flows that it receives in the future. In recent times the Chinese position has shown improvement as per the World Investor management rating which gives a score from 0-100 saw China at 79.6, this complements an improved CCR position as of recent years (IMD, 2013). Malaysia's position too can be backed in recent years where it has been trying to improve its macro economic stability which promotes the FDI related atmosphere, infact as As per the IMD Malaysia depicted Resilience of the economy cycles is stronger survey saw Malaysia at 2nd position, also the diversification of the economy was placed number 2 for Malaysia, but was a worst performer in terms of government stability(IMD, 2013).

- MEII in India and Indonesia showed high positive significance recording high positive correlations of 0.890 (rank 1st), 0.727 (rank 2nd) and High contributions of 4.609%, 3.440% respectively. In china   medium positive significance with low correlations(rank 64th) but medium contributions of 2.947% (ranked 12th) were recorded in india.   This aligns with the literal findings that indicate that the Macroeconomic environment improves this impacts FDI positively. These findings are similar to by Tang 2008 who makes use of the Macroeconomic Environment Index compiled by the World Economic Forum. He suggests that it is necessary to that the index and its composite sub indexes not only measure macroeconomic policies, but also a country's performance in a number of related aspects, such as its credit rating. This study uses World Bank indicators to empirically test the relationship between macroeconomic level corporate governance and Inwards FDI flows into emerging market countries, using a panel data set of 33 countries between 1997 and 2002. The key finding is that

macroeconomic corporate governance has a positive and significant effect on inwards FDI flows, suggesting host country governments and authorities should shape policy to bring macro economic stability. In the study Adele finds positive relationship between FDI and the macro economy, however instead of using MEI, he uses a world bank indicator but however his OLS regression output suggests positive relationship as shown in the findings in this report for China, India, Indonesia and Philippines (Adele 2010).). In the working paper by Sahoo, 2006 **finds positive relationshi**p between FDI and the macro economy, however instead of using MEI, they use a world bank indicator but however his OLS regression output suggests **positive relationship as shown in the findings in this report for China, India, Indonesia and Philippines** (Sahoo, Pravakar, 2006) In China As per the Global Competitiveness Report (GCR) macro economy shows a factor driven economy is pushed in China which is efficiency driven FDI factor(As per Dunnings Eclectic paradigm classification) which creates positive FDI flows. Currently in the ranking China is placed at 24th position. In the case of Indonesia In the latest GCR (2010 – 2011), Indonesia moved up in rank to 44, from 54 in the previous year (out of 139 countries). However this was mainly driven by better perceptions about the macroeconomic environment. However as per the IMD survey the resilience of the economy to economic cycles is strong in Indonesia is ranked 23rd while the diversification of the economy (industries, export markets, etc.) scoring 6.1 ranked 23rd in the world is another strength of Indonesia (IMD, 2013) (Indonesia, 2011)

- High significance was portrayed by political stability in China depicting low correlations (ranked 61st) and high contribution of 2.019 %(Ranked 19th). depicted had a medium positive significance, recording low correlations of 0.185 (rank 53), but high

contributions of 2.388 (rank 20), suggesting the increase in PS impact FDI Favorably. As per the IMD if the risk political stability index increases which means that FDI should increase proportionately. This suggests that if political stability index increases its impact should increase FDI proportionately in China in the long run while in Malaysia it has a more significant impact in both short and long run. Krifa et.al who found the variable of our interest "political risk" using OLS regression, the results show that it is significant at 5% level and positively associated with FDI. The literature on "international business and political risk has long been aware of the impact of incumbent businesses on multinationals and of the prevalence of economic nationalism as a source of MNC trouble" (Jackoberson et.al 2010). More recent research has also emphasized the risk that stems from indigenous firms, whether partners of or competitors to MNCs promote FDI flows (Oetzel, 2005). Foreign investors should be able to observe such simmering or explicit sentiments in prospective host countries, first and foremost by observing the contents of laws and regulations established by the legislative assembly. MNCs are likely; to prefer to invest in countries with a left-leaning public. (Sun et.al, 2011; Hadjila KRIFA-SCHNEIDER, 2010) this position was also seen in the Chinese Pharmaceuticals Industry stable political conditions in China have had a stronger positive influence on the FDI decisions of the late entrants. (Jiang, (Spring 2005)) as per recent times however as per the IMD **expert opinion survey China's economy depicted high in Dynamism of the economy and political stability(IMD, 2013). When PRS groups data is taken in to account Malaysia's Political stability and absence of violence was in average close to developed economies such as UK and Australia and is good sign for Malaysia's progress in the future.**

* S pungent who says that Economists agree that FDI positively flows to environments with less investment risk and stable macroeconomic environment, As we can see the in the table the macroeconomic environment index has been at 6 from the year 2000 but declined in 2003 to 25 and the declined again in 2005 to 29 and in 2008 it improved further to 11 and is now 4th in the World. The findings suggest showed higher political risk with less stability will proportionately reduce FDI. While taking this factor in to consideration the macroeconomic environment takes is in to account government budget balance as % of GDP, Gross National Savings % GDP, Inflations annual Change % of GDP, Interest Rate Spread %, General government debt and country credit rating were taken in to consideration. Hence a cross correlation of 0.356 can also be seen between the variables indicating that MEII and PS increases it impacts FDI positively. This is confirmed by UNCTAD East Asia will outperforming other developing regions. Inflows to the region rose by about 24 per cent in 2010, reaching $300 billion, rising especially in South-East Asia and East Asia. Similarly, strong economic growth, spurred by robust domestic and external demand, **good macroeconomic fundamentals** has growth in the region", the strong economic fundamentals should be elaborated. In 2008 period when declined from 1.6 trillion to below 800 million by 2009 and by 2010 it was on the upward trend till 2011 it was up to 1.2 trillion for China, thus China's overall competitiveness position was described by the global competitiveness report as being a country in Transition from 2 to 1, while in 2012 it is an efficiency driven model. If this index was broken down it shows budget balances have seen improvements by its rank increasing from 50 in 2008 to 49 in

2012 but gross national savings rank has reduced showed some outward flows while inflation had improved from 63 to 62; however the gross national savings rate and the interest rate spread and government debt has all seen increases in rank and hence the rank detonates from 6 to 36 in the span of a decade. As stated by Sahoo "The People's Republic of China (PRC) and East/Southeast Asian countries have made rapid improvement in their macroeconomic situations, investment, exports and employment over the decade of 1980s and 1990s through the use of large amounts of Foreign Direct Investment. Like other developing countries, Chinese focus their investment incentives exclusively on foreign firms. Over the last two decades, market reforms, trade liberalization as well as more intense competition for FDI have led to reduced restrictions on foreign investment and expanded the scope for FDI in most sectors". The findings are found by Dorner et.al who suggests Compared to the past 10 years in china, only the 3rd pillar of the GCI, the macroeconomic environment index showed improvement, though breaking it down to "sub-indices" we get again a rather heterogeneous picture.. He further goes on to state that a stable macroeconomic environment promotes FDI and Chinese FDI has promoted it in the recent decade as Poncent suggest that the indicator signifying macroeconomic stability shows considerable decrease (increase of government debt, foreseeable recession, increase in inflation, crediting problems, low rate of national savings, etc.), while increase derives rather from the positive country view of institutional investors (Poncet, 2007).

- ERS depicted high positive significance for Indonesia and Malaysia while India depicted a high negative significance. Correlations of - 0.631, 0.582, 0.762 and contributions of 5.49% (rank 1), 1.524%, 2.965% were recorded for India, Indonesia and

Malaysia respectively. The negative correlation indicates that in India. **negative effect ranked on FDI which means that when that when Exchange rate stability increases it discourages FDI in India while an inverse effect was expected in Indonesia & Malaysia. These findings are similar to that of Catherine et.al 2011 who conducts a panel regression on 6 countries using two decades of data, he finds that some courtiers have positive significance while other countries have negative significance. From an Indian viewpoint** Erdal and Tatoglu (2002) claimed that the instability of exchange rates have a negative relationship with FDI inflows. Their study investigated the case of Turkey whereby a highly volatile currency would discourage foreign investments. Within the Indian scenario it was found that ERS was negatively significant in India through a study done by bhagmi 2007 et.finds significant negative relationship using a random effects model In countries in SESEA which includes India, he suggest that A particular kind of macroeconomic instability is that of exchange rate volatility. "If exchange-rate changes merely offset price movements so that real purchasing power parity is maintained, the exchange-rate movements would have little real effects. uncertainty regarding the future economic and business prospects of the host country". To capture the volatility in exchange rates which negatively affected India in his findings; If we consider the IMD estimations on this figure ERS in India is amongst its strengths recording number 2 position in the world. The appreciation of the Indian rupee relative to world currencies is debatable as per these studies a less stable Indian rupee is more attractive for FDI as India. Infact the author looked at trend graphs of the rupee relative to the US dollar and large depreciation can be seen between the 2007 to 2009 period. This was primarily done to fuel exports, to reduce current account deficits and other factors.

However India also possesses Foreign currency reserves 297 Bn in the world is ranked 8th in the world which shows which stabilizes the rupee from external global shocks. India was ranked 23rd in the world in terms of Exchange rate support the competitiveness of enterprises survey ranks and is a strength (IMD, 2013; authors, 2011). Furthermore Catherine et.al in her study found exchange rates in different countries to have varying degree of signs and it was told that it was all based on the current dynamics of the Exchange to FDI relative to where it comes from. However the Indonesian Scenario is supported by Catherine et.al 2011 who also finds a positive significant effect using Multiple regression model for Indonesia which matches the reports findings. Malaysia findings however do not match the findings of Catherine et.al 2011 who suggest Malaysian exchange rate drives FDI into the country but found a negative correlation which means that appreciation of the Malaysian Rupee to other international currencies will discourage FDI. (Catherine et.al, 2011) The exchange rates support the competitiveness of the enterprise. IMD places **Exchange rate stability as a weak indicator and is defined as a** Parity change from national currency to SDR, 2011 / 2009 and shows that Malaysia is slightly below par to global averages of 0.1 and is placed 42 in the world for ERS. Furthermore IMD reports that The Investment risk is 66.2 compared to the global IMD average of 69.2 may have contributed to this phenomena. (IMD, 2013).However Malaysia's exchange rate support the competitiveness of the enterprise survey saw Malaysia at number 1 in the world. (IMD, 2013)

-SD was having a medium significance recording low negative correlations of 0.128, 0.139 and high contributions of 2.605%, 3.557% for India and Malaysia respectively. This suggests that though that SD does have insignificant relationship on the short run but

largely effects FDI in the long run as the contributions indicate. **Most studies have found little significance by Kamal et.al who found no significance in his case analysis with econometric research for a variety of research papers taken from 1990-2003 revel that it has no significance in East Asian Countries. "**At the same time, it is **generally recognized that FDI is only a complement to domestic investment and that sustainable development benefits to host countries depend, to a high degree, on the absorptive capacity among the local enterprise sector". Therefore SD increase does not encourage FDI in short timeline but rather on a longer timeline.** in a better climate of investment environment in which private sector activity can flourish, each type of foreign investment can make a valuable and contribute to economic growth, then sustainable development. The study found that "FDI stimulates not only economic growth but its impacts are greater than investment by domestic firms. The study encourages host government to continue promote policies concerning foreign investment. Therefore this suggests that it does not have direct effect on FDI but will indirectly be a significant effect on the nation". (Sosukpaibul, Net Foreign Direct Investment, 2007). SD index in Malaysia as stated by IMD hovered around the mean of 7.725 for Malaysia compared to India hovered around the mean value of 5.883 as per the descriptive statistics and Malaysia is generally higher than other countries in the data set. The World Data centre ranks Malaysia higher than India in terms of sustainable development which depicts that Malaysia with a score of 2.116 compared to 1.624 of India (Index, 2013).

5.4 FDI determinants for Rules regarding entry and exit

AFC was high positive significance in India, recording high correlations of 0.702 (rank 19) and high contributions (rank 5th) **suggesting that increased AFC will encourage FDI** in India. While in Malaysia **a high medium negative significance was recorded depicting high negative correlations of 0.675 (rank 22) and medium contributions of 0.781 (rank 34), suggesting the increase in AFC will impact FDI unfavorably in both the short and long run.** the literal findings of Boden et.al suggests Horizontal FDI is stimulated by FDI as the India saw market seeking forms of FDI (Chaterjee, 2009) . However Vertical FDI is known to have a negative effect in Malaysia, Indonesia and Switzerland especially in relation to US FDI by US MNC'. ((UCSC, 2012) Therefore the author believes by increasing protectionist stance in Malaysia it will only hinder FDI and more openness Is advocated for Malaysia to improve FDI flows in to the country as Malaysia strengths lay in its venture capital, Stock markets and availability of credit for business is above the par in the world ranked 1, 1 and 2 respectively. By increasing protectionism we are exposing Malaysia to more investment risk as its already high being at 32nd position in the world(IMD, 2013)

- RFCT was depicting medium negative significance recording a high correlations of 0.438 (rank 36) and medium contributions 0.733 (rank 36) depicting that increased banking and finance regulation discourages FDI in India **RFCT was depicting medium negative significance recording low correlations of 0.319 (rank 50) and high contributions of 3.814 %(rank 7), suggesting that if banking and finance regulation were to increase then it will discourage FDI in Indonesia in the long run. While Malaysia depicted high RFCT positive significance, recording high positive**

correlations of 0.534 (rank 29) and high contributions of 3.234 (rank 12), suggesting the decreasing RFCT environment at acceptable levels (5-6) will impact FDI favorably in both the short and long run in Malaysia. Cheng et.al who suggests for a panel study conducted in Africa finds "negative correlation between the cost of regulation and FDI growth rate is self-evident", based on the macro-economic dynamics, trade and investment in the studied five countries in Africa finds negative growth effect. This suggests that the expected outcome is an increase in banking and regulation (RFCT) will discourage promotion FDI. However in other studies it is noted that Mali, albeit with higher costs of regulation, has high FDI growth rate compared to Ghana (cheng et.al 1998) However in India real short term interest rates were -2.3% ranked 9th in the world, the banking and financial services do support business activities efficiently survey ranked India at number 14 in the world (IMD,2013) it is evident that in India progressive deregulation and liberalization policies in relation to RFCT in recent years for has Induced Indian FDI and hence the determinants shows a negative correlation in both short and long run as we see India's FDI grow through the decade 2000-2009. . In Indonesia has also seen variety of laws changing for intellectual property and banking laws in recent years has had a more deregulated stance and has promoted FDI in the country. However more transparency and accountability is more important for Indonesia especially in current economic & social conditions have detracted investors from the country. But the overall stance Indonesia follows has had positive effects recording higher FDI in the long run. *Jakarta Post*, 22/11/2000; *The Economist*, 29/7/2000; *The Straits Times*, 30/1/2001). ((Rajenthran, 2007)) Infact Central bank policy has a positive impact on economic development survey showed Indonesia at 19th place in the world and

is a positive sign investing in Indonesia in the long run. (IMD , 2013). For Malaysia the data suggest that the initial decreasing regulatory environment in relation to RFCT between 2004 to 2005 had a relationship where it may have drove up FDI 2003 to 2010 was continually decreasing the level of regulating which initially pushed up FDI from 2003 to 2005 saw FDI rise from 110 Billion to 993 billion but then saw decreasing trend -434 billion FDI flows at the end of the period but the overall positive was reflected by the mean average in the statistics which depicted a figure of 127 billion as the decreasing deregulation trend increased investments for Malaysia the positive flows are also seen in the standard deviation which depicts positive correlation seen in the standard deviation of $ 358 billion . The regression has also a positive significance in the regression as shown above. However the net outflows were not a bad thing for Malaysia infact as per Ben Shane 2012 Malaysia's net outflows are a result of the country trying to gain access other markets, where acquisitions of foreign banks plus oil and natural gas outflows which do not rely on low cost environment, (the banking sector accounted for RM 22.27 Billion or nearly 48% of outflow of the FDI in 2011 (Shane, 2012). Martin Khor states these outflows are known as other investments and has been described as a result of borrowing and lending of the public and private sector, (2)placements of assets by the banking sector abroad and withdrawal of these assets from abroad and non-bank private sector transactions with unrelated counterparties, including the sectors placements of deposits with the financial centres abroad infact onshore residential banks can lend to foreign investors any amount for foreign transactions depicting the level of banking regulations were open for foreign investors. Infact as per the IMD index Malaysia strengths were among the relocation of services and production centres as per the IMD. However the

IMD has stated that the outflows relative to inflows (negative inflows) in recent times has made FDI a weakness BY the IMD for foreign direct investment. The IMD also suggests that the risk of the financial system is adequately addresses survey places Malaysia are number 5 and Banking and financial services support business activities efficiently survey and credit placed at $3^{rd\ in}$ the world. (IMD, 2013) The real short term interest rate is negative -0.3 placed 33rd position in the world and shows the availability of cheap credit in the market, hence this has attracted investment outflows outside its borders (IMD, 2013)

5.5 FDI determinants in relation to foreign affiliates

PSC recorded high significance level recording a high correlations (rank 39) and medium contributions (rank 26), which suggest that i**f Public Service contracts are on the increase it will promote FDI in China. PSC depicted had a medium positive significance, recording low correlations of 0.172 (rank 55), but high contributions of 5.625 (rank 1), suggesting the increase in PSC will impact FDI Favorably in Malaysia. In china's case . N**o specific Chinese or Malaysian studies were found but however UNCTAD states that State owned TNC's now account for a large portion of inward FDI flows, infact some state owned TNC's are of various types but one type is completely owned by the Government, hence recent information suggest that CITIC group of China a completely 100% state owned TNC has set up operations in diversified sectors and is conducting public and private contracts (UNCTAD, 2011). "Many TNCs in developing and transition economies are investing in other emerging markets, where recovery is strong and the economic outlook better. Indeed, in 2010, 70 per cent of FDI projects (cross border M&A and Greenfield FDI projects) from these economies were

invested within the same regions TNCs, especially large State-owned Russian Federation, India and China – have gained ground as important investors in recent years as the result of rapid economic growth in their home countries, abundant financial resources and strong motivations to acquire resources and strategic assets abroad" (UNCTAD, 2011)As per the IMD China is Socialist country and the expectation is that higher PSC is associated with FDI. China in recent years however has increased its PSC coverage but and the state ownership of enterprises is not a threat to business activity china ranked 53rd, Employee or Employer's Social security contribution rate was below global averages in China and was an area of improvement China had to look in to. The findings suggest though that China is seeing these shortcomings an improvement in these policies will Impact FDI positively. Furthermore this corresponds with literature as there is no specific direction of how PSC is supposed to impact FDI except based on the prevailing conditions in the PSC and the entities involved. (Europa, 2004) Therefore PSC conctact holders should provide from host and home country senders and reciepients to enjoy larger state based TNC investments in the future as it is an increasing trend for FDI in recent years (UNCTAD, 2011; IMD, 2013).

-M&A and Greenfield Investments had a high positive significance in relation to FDI in China and Indonesia. M&A recorded a high significance with a positive correlation of 0.639 (rank 30th) and high contribution 2.528%(rank 14th) indicating that if M&A is on the increase it will increase FDI. While Greenfield only had low significance with high correlations (rank 26) but low contributions(Rank 43). This suggests that both M&A and Greenfield have a strong relationship to FDI as both variables have strong correlations but M&A possess a stronger impact on FDI in China. While in Indonesia **M&A depicted**

medium positive significance, while Greenfield depicted medium significance recording high correlations 0.634(rank 30) and 0.668 (rank 28) while contributions were 2.387% and 0.913%. This suggests that both M&A and Greenfield have a strong relationship to FDI as both variables have strong correlations but M&A possess a stronger impact on FDI in China in both short and long run. Using the dataset of FDI on, M&A and Greenfield FDI with a comprehensive set of external and internal factors to estimate a dynamic panel model, Byun et.al paper offers new findings which found positive significance for both variables and stated that designing a policy framework to attract FDI, particularly in a type that is more conducive to economic development, to emerging countries is essential. Initially, GDP per capita, macroeconomic and political stability, etc known as country-specific factors matter a lot for FDI flows both in the structure of M&A and Greenfield FDI. This suggests that the role of governments may play a vital role in help steady FDI flows, to emerging countries. The policy focus should be directed at strengthening economic **fundamentals and maintaining macroeconomic and political stability** in order to sustain high FDI flows. Second **global and regional spillover effects on FDI flows to an emerging country and such effects are stronger on Greenfield than on M&A FDI having greater positive correlations.** In there is an appreciation in FDI to all emerging countries, it is likely that FDI to any individual emerging country increases as well, and this phenomenon is more visible when we consider M&A's. Spillover effect are maximized in all types of FDI flows if it is originated inter-regionally rather than from outside. Policy should scrutinized at the regional level to manage FDI flows prudently(particularly M&A's) to emerging countries. For example, a stable macroeconomic management framework in an emerging

country can generate positive impacts on FDI flows to other regional economies. Hence, promoting good institutions at regional policy forums and dialogues shall help increase the region's attractiveness as an investment destination. In China the report's findings suggest that both Greenfield and M&A encourage FDI. However the impact of Greenfield was emphasized more than M&A which was inverse the findings. However as per UNCTAD estimates the rise and quantum of Greenfield Investments in comparison to M & A is still dominated by M&A and thus adds weight to the findings. Furthermore Greenfield investments have been recently increasing in relation to in Investments in while divestment for happening mainly for M&A in China while the indicators used were number of deals hence the UNCTAD expected relationship has appeared in the findings (UNCTAD, 2011). . In descending order of size, Hong Kong, China; Republic of Korea (Korea); People's Republic of China (PRC); Singapore; and Indonesia were the top five recipients of M&A flows between 1987 and 2004 this justifies China's and Indonesia's position (Douglas brooks, 2007) however in Malaysia, **M & A depicted had a medium negative significance, recording high negative correlations of 0.624 (rank 23) and medium contributions of 1.245(rank 30), suggesting the decreasing MA environment at in the last decade impacted FDI unfavorably in both the short and long run in Malaysia. For example as the when the number of M & A steadily declined from 2007-2009 from 214 to 158 FDI subsequently declined from -274 billion to negative -782 billion. As per Martin Knor stated major FDI outflows from Malaysia may have been contributory factor for M&A significance as significant outflows were seen.** The FDI outflows reflect the strength of economies, the dynamism of transactional corporation (TNCs) and growing aspiration to compete in new markets. Therefore though

the number of FDI's increased in Malaysia, the greater magnitude was that FDI could be invested abroad by Malaysia especially in the banking sector and hence a negative association (Associates, 2005) (FAO, 2012)

CBV was with medium positive significance depicting low correlations of 0.283 (rank 49) and high contributions of 3.618% (rank 11), suggesting that low significance of CBV to FDI in the short run but will impact the variability of the data in the long run but will encourage FDI overall in India. The finding related to CBV can be explained by Madhavan et.al that finds a **positive correlation between FDI and CBV** and hypothesize that transnational technical communities accelerate cross-border venture-related activities, especially when they possess an entrepreneurship orientation. A regression analysis of factors determining cross-border venture capital investments provides evidence supportive of our argument where **positive correlations were found. The expected outcome is that Cross border ventures will encourage FDI in an environment which has experience and entrepreneurship orientation. While FDI does encourage the same in India it was found in** a conference proceeding that the FDI regime in India is still quite restrictive.As per the Global Competitiveness report for cross-border ventures, India ranks 57th in the world and ownership of between 51 and 100 percent of equity still requires a long procedure of governmental approval baring few sectors. This may have been the result of why there is little significance in the relationship but the variability is high as the value of CBV in India as per this report's authors data suggest that in his view, "there does not seem to be any justification for continuing with this rule. This rule should be scrapped in favour of automatic approval for 100 % foreign ownership except on a small list of sectors that may continue to require

government authorization. The banking sector, for example, would be an area where India would like to negotiate reciprocal investment rights. Besides, the government also needs to ease the restrictions on FDI outflows by non-financial Indian enterprises so as to allow these enterprises to enter into joint ventures and FDI arrangements in other countries especially in the banking sector" (P.A.Emmimal, 2011).

FI had a negative medium significance in India, with low correlations of 0.308 (rank 48) and high contributions of 3.09 %(rank 13), suggesting that the low significance on the long run is affecting FDI in a negative manner and explains the reduction in the variances of FDI. FI was having high negative significance, recording high negative correlations of 0.492(rank 37) and a high contribution of 1.925%. (Rank 19), which indicates that with the increase Foreign investors will discourage FDI in Indonesia. While **FI depicted had a medium positive significance in Malaysia, recording low correlations of 0.227 (rank 48), but high contributions of 5.074% (rank 2), suggesting the increase in FI impact FDI favorably in the long run** In India's case as per R. Jeyaraj et.al he finds in Indian FDI has enabled India to achieve a certain degree of growth, financial stability and expansion. The focus has been on reducing the economic problems in the country. India's policy stance was on gradual economic liberalization policy with an intention prevail over the structural defects that have caused the economic calamities post 1991. With these policy changes, FDI into India has increased rapidly since 1992. FDI to India increased by $97 million in 1990-91 to $5,526 million in 2004-05 because of institutional restructuring (S.gupta, 2011).However as per the IMD it was found that foreign Investors were not able to easily acquire in to domestic company survey ranked India amongst 48th

In the world with a score of 5.8 which was below the world average (IMD, 2013) We find that since Indonesia were having negative and positive FDI flows and hence the increase in foreign investors relationship with FDI has been misrepresented, however further studies conducted by Melbourne University suggest that just because there is an increase in foreign investors it does not always result in positive flows for the country, in their study analyzing the effect of agglomeration and co-agglomeration effects it suggests that variety of industries can have negative correlation and can be based on tax advantages, labor advantages and other factors and Indonesia shows higher fragmentation in industries rather than agglomeration causing a negative significance. (Blonigen, 2004).

In Malaysia's case **FI are not free to acquire control in domestic companies compared to the world average which is 7, in the data set the mean average of 5.68 (In 2000 was 4.54 and has increased steadily to 6.54) but has increased in recent times which is as per 2013-01-08 in the IMD rankings suggest it is 6.9 only 0.1 below the par global average of 7 hence this can be classified as positive trend in recent years as the government has been providing a more deregulated and liberalized stance in Malaysia has promoted this stance FDI in recent years which has promoted FI to be more prevalent in Malaysia** (Shane, 2012).

FFI had a positive medium significance in India, recording low correlations of 0.356 (rank 40) and high contributions of 1.583 (rank 24), suggesting that variability of FDI in the long run is determined by the amount of foreign financial institutions in India. While in Indonesia **FFI was having a high positive significance, recording high correlations of 0.743(rank 20) and high contributions (rank 3), indicating that the increase in**

FFI will encourage FDI. In Malaysia FFI depicted had a medium negative significance, recording medium negative correlations of 0.310 (rank 42) and medium contributions of 3.733 (rank 7), suggesting the decreasing FFI environment at in the last decade impacted FDI unfavorably in both the short and long run in Malaysia. Katkar 2006 suggets "Host countries may benefit immediately. From foreign entry, if the foreign bank re-capitalize a struggling local institution. In the process also provides needed balance of payment finance. In general; more efficient allocation of credit in the financial sector, better capitalization and wider diversification of foreign banks along with the access of local operations to parent funding, may reduce the sensitivity of the host country banking system and lead towards financial stability", therefore as per his study he finds that Badade et.al finds In recent times in the Indian economy is promoting MNC banks and insurance entities, despite communist party pressire opposing the finance ministries move to raise overseas investment limits in the insurance business. The government however pledges to allow companies like New York Life Insurance, Met Life Insurance to raise investment in local companies to 49 per cent from 26 per cent. ((Katkar, 2006)) Malaysia and Indonesia's case is best explained **As per Nalin J. 2009 on her study of examine the locational determinants of FDI , she finds with the help of literature from Petrou 2007 that FFI have positive effect on FDI and state that** "customer presence on developing country banks positively affect' location decisions; while positive effect is also based market size on developed country banks' decisions as per studies conducted by the IMF it is stated that the "presence of foreign banks in the local market may give some corporations investing in the EMC like Indonesia, (Malaysia is an EMC) are an added comfort that should problems arise, there will be recourse to the

parent bank. Furthermore, the international bank will be strictly regulated by an internationally recognized body, which may not be the case for the local bank. Also, as access to local securities and hedging markets increases, operational and other risks need to be carefully managed, especially in nascent markets and where standards and infrastructure are underdeveloped hence the increase of FFI will spur FDI growth" (group, 2003;Jain, 2009)

5.6 FDI determinants related to Standards of treatment

ACM had a medium negative significance recording low correlations of 0.235 (rank 53) and high contributions of 3.906% (rank 7), showing that capital markets show little significance in terms of its relationship on the short run but it influences the variability of the data in the long run in India. In Indonesia **ACM was having a medium positive significance, recording correlations 0.749(rank 17) and medium contributions of 1.1% (rank 30), suggesting a strong relationship as ACM increases it will increase FDI in Indonesia.** These findings are best described by **was best explained by Patterson Obtained results using panel data from 1981-2010 and random effects model anal illustrate that FPI is co-integrated with real rate of return on investments in the capital market, real interest rate, and investment implying that these variables are bound together in the long run. Therefore this shows the long run significance of these variable effects FDI in the long run. Therefore the effect in the long run are based on the variables and can pose a positive or negative relationship. The sign may overall have a low negative correlation as the data set is limited to 10 years and the last 3 years have seen FDI decline from 2.4 trillion to 1.1**

trillion dollars from 2007 to 2008 may have contributed to this position. However in recent times the stock markets in India provide adequate financing survey to companies placed India at 14th with a score of 6.8 which was a strength. (IMD, 2013) Indonesia might have a positive position but as per the IMD **however has high banking sector assets as percentage of GDP is 52% while finance skills are low with only scoring 5.5 only 52nd in the world and Auditing and accounting practices are amongst the worst in the world not adequately built for business survey placed Indonesia 53rd overall.** (IMD, 2013) Despite these barriers the deregulatory framework and liberalization policies in the banking sector will enhance FDI in EMC such as Indonesia (Shane, 2012). As suggested by The UNCTAD sectarian report to their study related to finding the interrelationships of FDI and FPI on a global level find that "While the determinants of foreign investment depend primarily on host country economic fundamentals, emerging markets could enhance their access to stable sources of foreign capital by at the practical level through activities of investment promotion agencies. For stable sources of FPI,such as long- and medium-term bonds (internationally and domestically issued), primary equity issues, depository receipts, venture capital funds and country funds (closed-end), the risk element is primordial. As investors attach importance to the liquidity of their investments, taking a long term investment position would require on their part a careful assessment of the risk involved. In the bond market, credit rating agencies play a determining role in assessing the risk of borrowers. In some instances official entities, at the national or international level, can help in reducing risks by providing guarantees or other mechanisms to enhance the creditworthiness of issuers/borrowers.". Indonesia and India should direct there efforts towards reforms in

these areas. (***A new Capital Adequacy framework*, Consultative Paper, Basel Committee on Banking Supervision, Bank for International Settlements, June 1999**. (UNCTAD, Comprehensive Study of the Interrelationship between between FDI and FPI, 1999)

Foreign companies recorded a high negative significance, with high negative correlations of 0.892 (rank 2) and high contributions 3.125% (rank 11), suggests that there is a strong relationship that with the increase in foreign companies it will reduce FDI in Indonesia. While Malaysia saw FC have a medium positive significance with low correlations and high contributions of 2.04%, implying that the variability of the data for FDI in the long run is effected by FC in Malaysia, In Indonesia's case however this could subsequently mean that increased divestments participated by foreign companies may reduce FDI. This is factual suggestion as the data suggests that year 2000, 2001 and 2003 Indonesia more outflows than inflows of FDI. Based on Wei 2006 book on how to develop the private sector in Indonesia he quotes "There was great concern when over the period 1998 – 2003 Indonesia experienced net FDI outflows, although in 2002 a small net FDI inflow took place. To a large extent the net FDI outflows since 1998 through 2003 were caused by the fact that FDI inflows in the form of equity and long term loans to FDI projects as well as the proceeds from privatization and banking restructuring were exceeded by the amount of repayments by FDI projects of long term loans to their principal overseas or to a foreign bank" ."However, in 2004 and the first half of 2005 net FDI inflows were again recorded. These net FDI inflows, though still smaller than during the investment boom years of the

early 1990s, indicate that perceptions of foreign investors about Indonesia's investment climate, though still unfavorable, have slightly improved after the election of President Susilo Bambang Yudhoyono in 2004. However, these net FDI inflows should not be a reason for complacency as Indonesia's investment climate is still regarded as the worst in Southeast Asia" (Wie, 2006). In Malaysia's case **Brealey and Kaplanis 2006 find a positive correlation between FDI and foreign companies/banks and the same relationship is seen in Malaysia which was suggested earlier.**

Investment protection schemes showed medium positive significance, recording correlations of 0.736(rank 21) and medium contributions of 0.902% (rank 36). This suggests that IPS motivated further FDI. For example since 2006 when IPS data was present no negative FDI is recorded. The trend from 2006 to 2010 increased from 491 billion to 1.3 trillion during that period. These findings are similar to UNCTAD's findings on the role of investment agreements in attracting FDI in developing countries indicates that international investment agreements add great weight to policy and institutional determinants of FDI. In fact transparency, stability, security and predictability are some features that it adds to the investment environment making ir more comfortable for investors to invest. If IIA's liberalize market access, as many of them do (in particular free trade agreements and regional integration schemes) they also improve an important economic determinant of foreign investment – the market size. The geographical expansion of regional integration schemes and/or deepening of integration, can, and in a number of cases did, stimulate additional investment inflows. (UNCTAD, The role of International Investment Agreements in attracting FDI to developing countries, 2009) The author believes this is especially important for Indonesia as **world**

and Auditing and accounting practices are amongst the worst in the world not adequately built for business survey placed Indonesia 53rd overall, therefore protecting the investor and providing incentives is the way forward for the country (IMD, 2013)

In terms of CL was having medium positive significance, recording low correlations of 0.315 (rank 46) but high contributions 1.596% (rank 22), suggesting again that the variation in the data of FDI can be best described by CL in India. Competition legislation depicted high negative significance, recording correlations of 0.499(rank 23) and high contributions of 3.317 %.(rank 9) this suggests that with increased regulation will result in the attraction in FDI falling in Indonesia. The variation in relationship is best explained by Kalil et.al he considers the correlation between FDI inflows and the competition period 1992-97 and the level of institution growth via the competition institution using a sample of 66 countries finds a positive relationship in developed countries but he argues that in developing countries by creating regulatory barrier and risks for the investor. The notion holds true that developing countries could accept lower environmental standards. On the contrary he states that CL can promote FDI as it helps the investor realise that there is level playing field without local influence putting the foreign investor at risk. In his spearman correlation he finds a positive marginally strong relationship between the variables which confirms the findings. when FDI *per capita* is used, **and positive and significant at a 90% Confidence interval when foreign direct investment per gross domestic product is used. Thus the expected effect is that competition legislation promotes FDI.** (Gesner de Oliveira, 2000))

5.7 FDI determinants related to trade and tax policy

- MTR has a negative medium significance of -0.724(ranked 17th) and low contribution (ranked 34th) implying that an increase in MTR would produce the risk of pushing away FDI investors. As per studies conducted by Maria Ahren , suggested using OLS regression state states higher restrictions followed by higher restrictions and higher import tariffs on Chinese imports in the home country will have a negative effect on FDI . The expected return on investment would decrease as it declines with higher trade costs. Incentives to produce in China and sell on other markets would also reduce. Consequently reducing FDI would decrease. Therefore, tariffs on Chinese imports in the home country are assumed to have a **negative correlation with FDI** in China as many of the FDI receiving firms export their production and face the trade costs associated with the concerned tariffs. ((Ahren, 2012)   As per the IMD a relative weakness of China was scoring low point in terms of their tariff on imports as the most favoured nation see China at 50th place. This is therefore an area of improvement. **In India case MTR was showing medium negative significance, depicting low correlations of 0.234 (rank 54) and high contributions of 1.596 % (rank 23), suggesting again that the variation in the data of FDI can be best described by MTR**. .**Fahath et.al where MTR were to have negative effect on FDI, furthermore** India's tariff rates are still among the highest in the world which reduces India's magnetism as an export base for labour-intensive manufacturing. (Bank, 2013; Carlos Rodríguez, 2009) On tariffs and quotas, India is positioned at 52 in 1999 and average tariff rate, India is positioned 59 out of 59 countries being ranked by the GCR. "Greater trade openness expectations would be preferred if doing so reductions of tariff rates to averages in East Asia (between zero and 20 percent) must be introduced.

Tariff rates on imported capital goods used for export, and on imported inputs into export production, should be duty free, as has been true for decades in the successful exporting countries of East Asia". As per the IMD India's weakness was the tariff barriers based on tariff on imports: most favoured nation simple average rate of 13 where it's ranked 58th in the world. (Priyaphan, 2009) In Indonesia **Mean tax rate high negative significance, while the variability in tariff rates also showed high negative significance. In respective order MTR and VTR depicted high negative correlations of 0.724(rank 23) and 0.622(rank 34) subsequently also having high contributions of 2.327% and 2.940% respectively. This suggests that if tariff rates and its variability are high it discourages FDI. To further justify the findings which are similar to UNCTAD which states there** are also "specific trade policies that can help to attract competitive and innovative TNCs, especially in the manufacturing industry. Facilitating trade (lowering tariff and non-tariff barriers, infrastructure, customs and other business procedures, export processing zones) is likely to attract trade intensive and globally competitive TNC affiliates" (UNCTAD, Comprehensive Study of the Interrelationship between between FDI and FPI, 1999). As per the expert opinion survey the competitive tax regime of Indonesia is an attractiveness indicator for Indonesia. (IMD, 2013)

- COI is negative medium significance implying that rising cost of Importing decreases FDI as the correlation is -0.468 and a low contribution of 0.045 . UNCTAD states that China continues to **experience rising wages** and production costs, TNC's are not off shoring **of low-cost manufacturing operations to China. Infact this type of FDI has been in decline and has been loosing momentum** and divestments are occurring from the coastal areas. Meanwhile, structural transformation is shifting FDI inflows towards

high technology sectors and services Furthermore. As per priyaranjan using a gravity model he assesses the determinants of FDI ASEAN 5, he goes on to state, "the host country should strengthen market controls in terms of competition (e.g., antitrust laws) and mergers and acquisitions or M&A (e.g., privatization). As a result of interdependency and globalization, macroeconomic policies and macro-organizational policies also become determinants of FDI. Monetary and fiscal policies that determine the economic stability of a country, such as inflation rate and external and budgetary balances can influence FDI. Many countries have established Export Processing Zones (EPZs) as a policy tool to attract FDI that would otherwise not materialize. EPZs are often defined as fenced-in industrial zones offering free trade conditions, a liberal regulatory framework and other incentives for firms exporting a minimum share of output. By 1997, there were over 27 million people employed (e.g. China 18 million, Mexico 1 million, 47.000 in Costa Rica, 166.000 in Guatemala, 50.000 in El Salvador, 61.000 in Honduras, 200.000 in Malaysia, 460.000 in the Philippines; these numbers can amount up to 20 per cent of total employment in a country) in some 850 EPZs worldwide. About half of these are in North America and Europe, a quarter in Asia, a sixth in the Caribbean and Central and South America and the rest in the Middle East and Africa. EPZs are usually found in countries with abundant labor supply. Activities inside EPZs are confined to low-tech, export and labor intensive manufacturing activities such as garments, textiles, food, and assembly operations in the electronics sector". The report further goes on to state "EPZs do not guarantee such a process and policy interventions are required to upgrade or target FDI that is more conducive to human capital development. EPZs have been most successful in countries that already started with minimum basic conditions (infrastructure,

stability, some trade liberalization, etc.) in place; when zones are well managed with few administrative burdens, streamlined customs procedures; when zones are built in appropriate locations, with reliable infrastructure and utilities; and when zones were aimed at specific industries. (ILO 1998, Madani, 1999, Radelet, 1999, UNCTAD, 1999)

5.8 FDI Determinants affected by tax policy international agreements on FDI

-DTT was found to have a negative medium significance, recording low correlations of 0.232 (rank 55) and high contributions 3.603% (rank 14), suggests that increase in DTT causes variation in the data of FDI in the long run in India. **DTT depicted had a medium negative significance, recording low negative correlations of 0.183 (rank 54) and medium contributions of 3.084% (rank 13), suggesting the decreasing DTT environment at in the last decade impacted FDI unfavorably in both the short and long run in Malaysia.** These findings are similar Blonigen et.al who assessors the **impact of tax treaties on FDI using data from OECD countries over 1982-1992. He finds that positive effects are only based on certain conditions of the, on the flip side treaty creation can have negative effects on investment as predicted by arguments suggesting treaties are intended to reduce tax evasion rather than promote foreign investment. However for** India's case based on Nunnerkamp et.al determinants of India's FDI outflows across a large sample of host countries in the 1996-2009 period. Based on gravity model specifications, he employ's Poisson pseudo maximum likelihood (PPML) estimators double taxation treaties (*tax treaty*) in he suggests that India's FDI reacts favourably to binding contractual arrangements that limit tax-related political discretion. The quantitative impact of the conclusion of double taxation treaties is

considerable. Calculating the marginal effect (with all other variables kept at their mean), FDI flows should more than double after the ratification of a double taxation treaty. It should be noted that reverse causation cannot be ruled out as Indian investors may induce the government to conclude double taxation treaties mainly with host countries where Indian FDI figures prominently (Peter Nunnenkamp, 2012).**.**

-Corporate Tax rate is negative high significance with high correlation of -0.453(rank 40) and high contribution of 4.629 %(Rank 9), **which implies that if corporate taxes were to increase that will discourage future FDI for China. The corporate tax rate in china has varied between 33% in 2002 to 25% in 2010 where FDI has also seen an increase from 4.67 billion to 1.24 trillion which suggest the hypothesis in India.** CTR was showing negative high significance, recording high correlations of 0.577 (rank 25) and high contributions 1.438% (rank 27), indicating that higher corporate taxes will reduce FDI. **CTR depicted high positive significance, recording correlations of 0.410 (rank 34) and high contributions of 2.289% (rank 22), suggesting that increasing CTR at acceptable levels (14%-16%) will impact FDI favorably.** Several literal studies prove that the rate of corporate taxation as investment incentives has a negative effect on investment decisions (Friedman et al., 1992; Loree & Guisinger, 1995). Jun (1994) extended the studies on how taxation affects FDI by considering the taxes in both home and host countries. He used a panel data of FDI inflows from ten non-US countries between 1980 and 1989 to estimate a linear specification with alternative tax measures. He found that tax rules significantly affect capital flows via foreign direct and home country taxes in particular the behaviour of FDI.

In addition, Jun indentified different tax parameters in home and host countries to investigate different channels through which taxes affect FDI. The most notable finding of Jun is that the home country statutory tax rate has a significantly negative effect on FDI when the country makes "foreign-source income subject to home country taxation. Many previous empirical studies have provided evidence that China's tax incentive policies have positive effects on FDI. Tung and Cho (2000) tested whether tax rates Influence foreign investment decisions and the particular forms of FDI in China. They showed that tax incentives are effective in attracting FDI to China, and moreover, influence the organisational form of FDI. Tung and Cho (2001) further investigated the issue by examining whether or not concessionary tax rates and tax incentives can attract FDI into certain designated areas in China. This study also controlled for other related non-tax variables such as infrastructure, unemployment rate and wage rate. The empirical results indicated that both tax and non-tax variables (infrastructure) are important determinants of regional investment decisions in China. However China was among the collected tax revenue recorded 18th place in world was a positive (IMD, 2013) (lIPING ZHANG, 2003) for an Indian specific studies Jing li using unbalanced panel data from the last two decades conducts a multiple regression, they find that China and India face investors that are attracted to determiants large market size, low GDP growth, and high volumes of imports from China or India, and low corporate tax rates. Subsequent differences between China and India have been identified where Chinese FDI is prevailent with an open economic regime, depreciating currency, improved institutional environments, and English speaking status, but deterred by geographic distance and OCED membership; none of these factors are important for Indian FDI (Duanmu, 2009)

For example the Average tax rate increased by 35.7% to 36.75% subsequently FDI reduced 400 Bn to 394 Bn during 2002 to 2003. The findings have been found Bagnesh in a conference proceeding by Bagnesh et.al corporate tax rates in East Asia range between 15 to 30 %, compared to India's glaring 48 % for foreign companies in India. High corporate tax rate is definitely a most important discouragement for foreign corporate investment in India. Infact India is placed 52nd in the world for corporate taxes and is a weakness. With respect to tax evasion, India is ranked 48th in the GCR 1999. As per The IMD real Corporate Tax does not burden for economic activity survey suggest that as per the IMD India still ranks amongst the better places to invest. (IMD, 2013) India However has other benefits in there system including the best consumption tax rates of only 12.5%, effective personal income tax rate of 12.2% and (as a percentage of an income equal to GDP per capita) and a mere 6.2% for consumption taxes ranked 21st in the IMD rankings (IMD, 2013) For Malaysian specific studies **For example when FDI increased from 110 Billion to 936 billion CTR was at 15.1% to 15.9%, infact when FDI was negative at CTR declined to the 14% mark. However as indicated by IMD latest figures the tax rate is at 25 %(ranked 32) is now above the world average of 24%. These findings are similar to park et.al who finds positive or negative significance based on the role of the pro foreign direct investment (FDI) environment offered in Singapore's remarkable economic success. Rapid growth of FDI is an integral element of economic globalization and governments around the world are competing vigorously with each other to attract FDI by offering fiscal incentives to foreign investors. In his paper, he finds the relationship between FDI and corporate taxation from the Singaporean perspective. His main conclusion is**

that corporate taxation is definitely an important component of a package of factors that have made Singapore an attractive FDI destination. Furthermore, Singapore's experience shows that lower corporate taxes will have a much greater impact on promoting FDI inflows if they are pursued with other pro-FDI policies rather than in isolation. In Malaysia real personal taxes do not discourage people from working or seeking advancement survey placed them at number 6th in the world (IMD, 2013) **Malaysia's corporate tax rate on profit this is the maximum tax rate, calculated on profit before tax placed Malaysia in to a weak category of rank 28th recording 25% which was not much above the average and hence did not discourage FDI.** (IMD, 2013) (Park, 2012) CTR had low significance recoding low correlations and medium term significance in Indonesia. This is no surprise as the country is ranked number 3 in effective personal income tax rate where a percentage of an income equal to GDP per capita is taken, collected tax revenues were 5th on the world, real personal taxes do not discourage people from working or seeking advancement survey saw Indonesia at 22nd and a high consumption tax rate 10th in the world. As per the expert opinion survey Indonesia however has a competitive tax regime (IMD, 2013)

5.9 FDI determinants related to investment incentives & promotion

-Investment Incentives had medium negative significance with high contributions of 4.42%, suggesting that II impacts FDI in China. It was found by Dinga et.that investment incentives creates FDI attraction he finds out about these empirical results via using panel level data from district in the Czech Republic from 2001-2006 using regression discontinuity approach (Dinga, 2008). However the negative significance can be explained by Zhang, et.al who suggests the following for China's FDI policy; "we could know that there should be a substitute relationship between the incentives and the investment climates. While offering incentives are short-time policy and building a good investment climates is a long-run task. From our analysis, the incentives to foreign investors show more and more negative effect on the economy. But it is no doubt that the incentives, ie. Tax incentives have played an important role in attracting FDI in the beginning of utilization of FDI". Therefore again the investment environment can promote FDI both positively and negatively (Dinga, 2011) (lIPING ZHANG, 2003) The significance of II has a positive medium significance In India, recording high correlations of 0.496 (rank 30) and medium contributions of 1.102% (rank 30), which states that increased investment incentives will increase FDI in India. For example when II increased from 6.10 to 6.55 FDI increased subsequently 462 Bn to 599 Bn during the 2005 to 206 period. As per the conference proceedings by Bagnesh et.al 2010 India's EPZ compared to China have done little to promote FDI. Inefficiency in government policy, red tape & restrictions are a few reasons of concern it has resulted in more discouragement of Indian FDI. **II depicted had a high positive significance, recording high positive correlations of 0.544 (rank 28) and**

high contributions of 2.307 (rank 21), suggesting that increasing II will impact FDI favorably in both the short and long run in Malaysia. For example when II Steadily increased from 2001-2006 from 6.46 to 7.55 FDI subsequently increased from 287 billion to 993 billion but in 2005 II decreased and increased but mostly decreased from 6.51 to 6.62 in FDI saw negative inflows during the 2003-2006 period. Further to are common findings by Dinga et.al, Priyaphan 2005 states that if game theocratic frameworks "In Game Theoretic Frameworks, determinants of FDI can be a range of political or economic factors and thus depend on the relative bargaining strength of the parties involved one commonly analysed example being the trade-off between increased tax revenue though MNE production and decreased tax revenue through incentives offered in order to attract the MNE in the first place. The incentives include government subsidies" (Priyaphan, 2005), As per the IMD the investment incentives are attractive for foreign investment placed Malaysia in 5th position (IMD, 2013)

-The significance of government subsidies has a high positive significance, recording correlations of 0.790 (rank 11) and high contributions of 1.425% suggesting that as Government subsidies increase it attracts FDI in India. For example when government subsidies increased from 3.8 to 6.8 (figures are to the power of 12). FDI also subsequently increased from 842 Bn to 2.42 trillion between 2007 to 2008 period. These findings have been found Asian Development Bank which suggests a positive significance suggesting that by Subsidizing FDI assists MNC's reduce production costs, trademarks, enhances the incentives to create patents and enhances the relative attractiveness of locating production facilities in the country offering incentives and raises the economic benefits of FDI relative to exporting. However proving subsidies is

one of India weaker points recording a ranking of 51stosition with an average of 3.7% are given to public and private companies as a percentage of GDP. (IMD, 2013) **Government Subsidies to Foreign Direct Investment** is having a high negative correlation of 0.812. Depicting that increased GS will decrease FDI in Malaysia. This is not surprising as Government subsidies to private and public companies as a percentage of `GDP is 52nd, Government budget surplus/deficit (%) percentage of GDP 45. (IMD, 2013) **. As per a study conducted by the conference board of Canada, Government subsidies to foreign investors can increase the total amount of inward FDI, but can also reduce any spillover benefits from these investments (** (canada, 2012)**). In studies conducted by Sun Tang found a positive significance and suggest that in order attract FDI for economic development and industrialization, China pursued policies such as offering subsidies, incentives, protection and guarantees potential investors. Consequently Chinese FDI doubled between 1986-1989. Therefore the expected outcome is that government subsidies promote FDI** (Sumei Tang, 2008)**. GS depicted had a low negative significance, recording high correlations of -0.812 (rank 14), but low contributions of 0.002 (rank 4), suggesting the increase in GS will impact FDI favorably in the long run. Therefore this suggest that as a current relationship Government subsidies discourage FDI in Malaysia but the Impact has not created a long term impact infact an invese relationship can be expected . The IMD suggests that Government subsidies have been on the rise to 4.3 ranked 52nd while 1.5 is the world average. The expected effect is best explained by Sun Tang found a positive significance and suggest that in order attract FDI for economic development and industrialization, China pursued policies such as offering subsidies, incentives,**

protection and guarantees potential investors. Consequently Chinese FDI doubled between 1986-1989. Therefore the expected outcome is that government subsidies promote FDI (Cabral et.al 2006).

The control of corruption was found to have a medium negative significance where high correlations of 0.659 (rank 23) and medium contribution 1.917% (Rank 20) of the variables were seen in China. Control of corruption is defined as "{Corruption is often defined as *the misuse of entrusted authority for private gain*. It occurs any time that public officials or employees misuse the trust placed in them as public servants for either monetary or non-monetary gain that accrues to them, their friends, their relatives or their personal or political interests". This implies that for FDI to increase the control of corruption can have a positive effect on FDI. **For example the findings are similar to results undertaken by Wei's (2000a) looks at the effects of corruption on international investor choices/decisions. Using a cross-section of bilateral FDI stocks, from 12 source countries to 45 host countries, he found a negative relationship with corruption on FDI investment while control was positively related (Zhou, 2007)** However to support international business transactions for TNC for FDI, it is imperative that the court system, obedience to parliament, constitution & coordination of all laws and regulations align with international business transactions and such laws with brevity in content for which primary laws do not address or motivate international investment has to be changed, while and open transparent Judiciary will restore investor confidence Furthermore to foster FDI, institutions, administrative personnel to support, implement and enforce such laws and regulations are also essential. Finding the proper balance

between various competing objectives and determining the proper instruments to achieve those objectives, is also important to have long term FDI growth(Priyaphan 2009)

5.10 FDI determinants of Hassle costs

BC depicted had a medium positive significance, recording low correlations of 0.091 (rank 64), but high contributions of 4.94% (rank 3), suggesting the increase in BC will impact FDI favorably in the long run. . Using a cross-section of bilateral FDI stocks, from 12 source countries to 45 host countries, they found a significant negative eject of corruption on FDI investment (Zhou, 2007). Therefore the expected effect that with increased BC will result discouraged FDI. From the magazine the star "PETALING JAYA: Malaysia took 60th spot in the Corruption Perception Index (CPI) this year, a drop of four places from last year. The country scored 4.3 on the survey which gauges the perceived level of public sector corruption among 183 countries. Malaysia is ranked third among ASEAN nations behind Singapore (9.3) and Brunei (6.3). About two-thirds of the countries surveyed scored below five, Transparency International-Malaysia (TI-M) secretary-general Josie M. Fernandez said yesterday. Malaysia is among 60% of the countries surveyed who scored below five," she said. Fernandez said the TI-M Corruption Barometer (CB) revealed that close to half of the 1,000 respondents believed the Malaysian Government was effective in its efforts to combat corruption. The enforcement of corruption has increased, Fernandez said." (Fernandez, 2011).

EODB showed low significance but had high correlations of 0.862 ranked in the top 10 correlations indicating that Increased EODB will encourage FDI. In Malaysia

Ease of doing business is supported by regulations survey saw Malaysia at 4th position. (IMD, 2013) **Kwok Yi Lam on his study institutions and development using pooled regression data from found to positively significance, however though the determinant is the same the data he received was from the Frazier Institute results. While Zhang in his OLS regression finds negative correlations in terms of the EODB. The expected outcomes is with Higher Ease of Doing Business will encourage FDI** (Haozhen Zhang, 2007)**. EODB was negatively medium significance, recording correlations of 0.801 (rank 13) and medium contributions of 1.024 %(rank 32). This suggests that the increase of FDI will be negatively influenced by the Ease of doing business. There was a constant decline in the QL index in Indonesia and it stubbornly depicted a negative correlation with a low medium contribution to the variance in the data for FDI flows. As per John Wan-Choo** As a consequence of globalization and economic integration, one of the most important traditional FDI determinants, the size of national markets, has decreased in importance. At the same time, cost differences between locations, the quality of infrastructure, the ease of doing business and the availability of skills have become more important (UNCTAD 1996; **Priyaphan, 2009;** Rajenthran, 2007)

-GB had a positive medium significance, recording correlations of 0.278 (rank 51) and high contributions of ̀ 1.494% (rank 26), suggesting insignificant strong relationships in the short run but describes the variation in data of FDI in the long run. Red tape and bureaucracy has reduced investor confidence in EMC's .They note that investing in India, for example, is more difficult than investing in China. Therefore it has been chosen as location determinant in conference proceeding conducted by the IMF, ADB and HSBC.

The customs authorities were amongst the worst in the world and as per the survey on efficient transit of goods India was ranked 50 while the survey relating weather tax evasion being adequately addressed India again shows weakness showing a ranking of 50 in the world. (IMD, 2013) Though that bribing and corruption showed low significance it did have a high correlation of 0.4 and above which depicts that it has a significant relationship with FDI but does not explain largely to the variance of data in the dataset. However as per the India was placed among 49th as the most corrupt places to do business (IMD, 2013)

-TRSB has a high significance with strong negative correlation (rank 9th) and low contribution(rank 18th). TRSB is the time required to start a business, and the relationship has a negative significant correlation of -0.792 and high contributions of 2.056% implies that the longer it takes to start a business it FDI reduces proportionately. The time required to start a business in 2000 was 48 days but has reduced 38 days in 2010. The reduction has seen FDI rise from $400 Bn in which it was 48 days where in the peak in 2007 FDI was 1.4 trillion where it was 41 days and by 2012 at 1.24 trillion it remains at 38 days. Based on Abdul matleb study based on panel data of 60 low income and middle income countries including china found negative but was insignificance was low compared to other variables. Other findings such as the European Commission find no significance. Julio et.al data reduction techniques find positive and significant relationship between TRSB. His explanation stems that unitary value increase would result in TRSB impacts it by increased FDI flows that the Portuguese Government should take note of. However no specific Chinese studies were found in this regard. The author of the report in this finding

ascertains that longer the time required to start a business for foreign companies would result in lost opportunity FDI income gains from the days lost and may also deter TNC investors away from FDI the longer the procedures take. Therefore a negative relationship would be better where higher FDI flows are associated with lower TRSB. However we find TRSB to be high in china and hence as per IMD one of its relative weaknesses are that the startup procedures and procedures related to start a business is a weakness in China. China also ranks 56th in the world in terms of startup days (IMD, 2013; Carlos Rodríguez, 2009)

-QL showed high positive significance recording high correlations of 0.632 (rank 27) and high contributions of 1.51% (rank 23), suggesting a higher quality of life will encourage FDI in China. John Choo Woo again confirms this finding the positive association is shown in the study conducted by Wang et.al who found a positive correlation between FDI and QL which he measured through the quality of air, however QL index by IMD is a more comprehensive predictor of Quality of life. "The impact of QL on FDI is a factor that has not previously been studied and hence only a hand few studies showed positive correlation but no studies found a negative correlation. Since the inflow of foreign capital is almost always accompanied by the movement of foreign personnel to the new locality, it is natural that these investors would pick a location in which the quality of living is better, ceteris paribus, to improve on-the-job consumption and to reduce payment for hardship allowance" (Wang et.al, 2011). Therefore the Expected outcome is that when QL increases for a country it will promote FDI in China. QL was having a high positive significance, recording correlations of 0.672 (rank 20) and high contributions of 2.855% (rank 20), suggesting that a higher QL

in India will encourage FDI.. **However India is known to have high consumer price inflation ranked among 57th in the world. The ageing of society** is not a burden for economic development (Survey) **in an Indian context was a strength as they were ranked 9th in the world. The system in society supports competitiveness India scores 6.9 and is ranked 14th in the world.** (IMD, 2013) **Another weakness in that India was placed 58th in terms Human development index as per the IMD** (IMD, 2013) **QL depicted had a medium negative significance, recording low correlations of 0.329 (rank 41), but high contributions of 2.985 (rank 14), suggesting the increase in QL will impact FDI favorably in the long run In Indonesia. The positive association is shown in the study conducted by Wang et.al who found a positive correlation between FDI and QL which he measured through the quality of air; however QL index by IMD is a more comprehensive predictor of Quality of life.** Therefore the Expected outcome is that when QL increases for a country it will promote FDI especially since as per the IMD index however QL indicators such as employee social security, HDI, total health expenditure (as a % of GDP), medical assistance (number of inhabitants per physician and per nurse), employment, female employment and GINI index were all weak indicators of Malaysia compared to the world. Ageing of society is not a burden to economic development survey ranked number 2, social cohesion was number 3 and pension funding was number 4 were strengths in the economy (IMD, 2013). **There was a constant decline in the QL index in Indonesia and it stubbornly depicted a negative correlation with a low medium contribution to the variance in the data for FDI flows. Quality of life was positively significant recording high correlations of 0.836 (rank 10) and 1.203% (rank 27), suggesting a higher quality of life will increase FDI**

flows. This suggests that with increased quality of life in the short and long run will promote FDI. . For example when QL increased 4.19 to 4.49 in 2009 to 2010 FDI increased from 487 billion to 1.3 trillion John Choo Woo again confirms this finding The positive association is shown in the study conducted by Wang et.al who found a positive correlation between FDI and QL which he measured through the quality of air, however QL index by IMD is a more comprehensive predictor of Quality of life. Therefore the Expected outcome is that when QL increases for a country it will promote FDI in Indonesia.

5.11 FDI determinants related to Market size

- **GDP growth and GDP per capita records both a medium and high significance in correlations (rank 14th and rank 30st) and high contributions (rank 41 and rank 6) . This implies that if GDP per capita increases in China it will result in FDI increasing. For example between 2005 to 2006 GDP growth increased from 10.1%, to 11.3%; while GDP per capita also increased by $ 1490 to $ 1731 while FDI also increased proportionally 5.31 Bn to 1.02 trillion. As per Nunerkamp et.al 2002,** Among more traditional FDI determinants, market-related factors clearly stand out. Agarwal (1980) considered market-size of the host country markets to strong determinant particularly for developing country investment flows Subsequent empirical studies strengthen the evidence behind this finding. In terms of specifically Chinese Findings Agrawal Liu et al. (1997), Wei and Liu (2001), Zhang (2002) finds a positive significance relationship and states that Rapid economic growth creates large domestic markets and business opportunities for foreign firms to invest in China (Agrawal, 2009; Catherine et..al) As per the IMD China was amongst the GDP growth and GDP growth

were both ranked second best in the world recording 8.7 and 9.2 percent changes based national currencies at constant levels. However GDP per capita was amongst the weaker indicators recording 53rd in the world with $5416.6 with PPP adjusted figures getting a rank of 54 with $8242 per capita. (IMD, 2013) **GDP growth and GDP per capita were having medium negative and high positive significance, with correlations recorded .0.091 (rank 66), 0.645 (rank 19) and contributions recorded of 2.537% & 1.503% respectively. This suggests that if GDP per capita increases it will also increase FDI and GDP growth explains the variation of the data over the long run in India. For example when GDP per capita increased from As per Nunerkamp et.al 2002**. Using random effect model using panel data from 1975 to 2009 to identify the FDI inflow determinants in BRIC countries found higher the market growth and the larger market and have a positive and significant relationsh. FDI, therefore, tends to flow to the countries with larger market size and higher economic growth rates in which larger economies of scale could be provided for FDI to exploit their ownership advantages (Culem, 1988; Agrawal, 2011). In terms of GDP growth the insignificant correlations did not depict the importance of the variable as an immediate effect but since the PCA found a relationship it shows longer term effects. As per the IMD Real GDP growth and real GDP growth in India is among its strengths ranked 8th and 11th in the world respectively (IMD, 2013) In terms of GDP per capita however was a weakness in India recording GDP PPP adjusted per capita and GDP per capita as the 59th position in the world recording values of 3705.4 Bn and 141.7 Bn respectively (IMD, 2013) However on a positive note the Indian economy was known to be resilient in terms of its shocks, depicting the very size of the economy and how internally resource rich the country (IMD,

2013) (Peter Nunnenkamp, 2012) Furthermore though that the PCA did not recognize the weight of the variable the regression depicted 0.824 correlations for WFDIS and its correlation is justified as India in terms of Direct Investment flows was placed 15th in the world (IMD, 2013). It is also understandable that total exports did not featured a low significance but recorded high correlations but very low PCA contributions indicating the Impact to FDI on the long run is insignificant. Infact India is among the worst among the world as exports as % to GDP, with the highest direct investment stocks invested ranked 49th in the world while it had a negative current account balance indicating that it is not a conducive environment for exporting (IMD, 2013) IIWRB has a high correlation of 0.833 but has been end since India displays high attitudes towards globalization are positive in society survey placed India 15th in the world. **GDP per capita and GDP growth depicted had a low negative significance (but high correlations negative) and medium positive significance, with high negative correlations of 0.866 (rank 7) and high positive correlations of 0.408 (rank 35), with high contributions of 0.098 (rank 52) the other with high contributions of 1.817 (rank 25) respectively. Suggesting that higher GDP growth promotes FDI this was shown by Fahin and Tanin 2006. Furthermore** These findings are confirmed by Priyaphan 2009 who uses a gravity model to assess the determinants of FDI in the ASEAN. The determinants for attracting market-seeking FDI are national markets and include market size (i.e., population), per capita income, and the market growth of the host country however IMD rated that GDP per capita was a weak indicator for Malaysia as per capita income was 9609.4 (ranked 47 in the world) but was way below the world average of $ 30,312. (IMD, 2013) traditional variables such GDP growth, GDP per capita and % share of World FDI all have High,

medium and High positive significance levels, recording correlations of 0.799 (rank 14), 0.871 (rank 871) & 0.851 (rank 8) with high, medium & high contributions of 1.913%, 1.299% and 2.905% respectively. These variables indicate that all these variables related to market size if increased will have significant relationship of increasing FDI furthermore the relative increase in the share of global flows will increase FDI in the ASEAN. These findings are confirmed by Priyaphan 2009 who uses a gravity model to assess the determinants of FDI in the ASEAN. The determinants for attracting market-seeking FDI are national markets and include market size (i.e., population), per capita income, and the market growth of the host country. Real GDP growth and real GDP growth per capita s ranked 9 and 10th respectably However GDP per capita was a weakness with 57th ranking $ 3573 (IMD, 2013; Peter Nunnenkamp, 2012) (**Priyaphan, 2009;** (Rajenthran, 2007) **WFDIS depicted had a medium positive significance, recording low correlations of 0.145 (rank 59), but high contributions of 1.9 (rank 24), suggesting the increase in WFDIS will impact FDI favorably in the long run in.**The sign on the FDI stock variable is positive and significant at the one percent level just like the findings of Sethi et al (2003). These findings imply that countries currently receiving high levels of FDI will be more likely to attract future FDI than countries currently receiving low levels of FDI. Furthermore in his article he suggest that WFDIS is hard to interpret and furthermore no articles were found from the 125 articles read about WFDIS is interpreted to have a positive relationship. Therefore the expected outcome is higher WFDIS positively affect FDI. IMD suggests that inward FDI was currently a weakness only depicting 10.8 billion (ranked 32[nn] in the world) compared to the world average of 23.8 billion, Malaysia has always been in the 1 billion to 9 billion tier as per UNCTAD

world investment report, therefore it is doing better than its counterparts in that regard. Furthermore the direct investment stocks inward was only 101.3 ranked 35th while flows inward were 10.8 Bn ranked 32 in the world as per IMD rankings therefore improvement in this area is paramount importance in the long run. (IMD, 2013)

5.12 FDI determinants related to Openness

In terms of IIWRB or openness it is found to have a high positive significance with high correlations 0.867 (rank 4th) and low contribution of 3.613 (rank 11) implying that as a country increases that as trade openness increases it will increase FDI in china. IIWRB or openness refers to the level of trade between countries, economies or entities.. Trading includes import and export, FDI, short or long term credit, and remitting funds abroad. Open economies generally greater market opportunities, at the same time they also face greater competition from businesses based in other countries. **More openness followed by long standing relationships in partner markets in which trade of intermediate, capital and complementary goods are exchanged on long standing relationships which promote FDI.** Alternatively the greater the degree of inter-market trade is enhances FDI and thus trade openness is generally expected to be a positive and significant determinant of FDI (Lankes and Venables, 1996; Holland and Pain, 1998; Asiedu, 2002; Sahoo, 2006). In Chinese specific FDI studies it was found that through his using panel data from 1990-2009 he finds a positive significance as he states "this study thus examines the impact of FDI on host country's growth as well as the effects of some threshold conditions in 15 East Asian economies. The sample economies are classified into three groups namely: (1) high income group, i.e. Hong Kong, Japan, South Korea, Singapore, and Taiwan, (2) middle income group, i.e. China, India, Indonesia, Malaysia,

Philippines, and Thailand, and (3) low income group, i.e. Cambodia, Lao, Myanmar, and Vietnam. The study compares the impact of FDI among these three groups with different threshold conditions in terms of levels of education, investment on infrastructure and trade openness."(Kotrajaras, 2010)) **IIWRB depicted medium positive correlations recordings of 0.892 (rank 3) and contributions of 1.192 %(rank 28), depicting that FDI is encouraged by more integration or trade openness in the markets in FDI. For example when IIWRB increased from 1.20 trillion to 1.58 trillion FDI increased from 487 billion to 1.3 trillion approximately in Indonesia.** TE exports had 0.892 (rank 3) but a negative contribution level, furthermore however exports of goods was weakness of the Indian Economy and it clearly shows that the economy is not performing enough to potential. (Priyaphan, 2009) however as per the IMD the attitude toward globalization is generally positive in society survey saw Indonesia at 20th which was strength of Indonesia (IMD, 2013)

-In terms of total exports had a medium positive significant impact on FDI with a correlation recorded of 0.868(rank 3rd) and low contribution of 0.348(rank 37th). This implies that if exports increase FDI would increase proportionately. For example TE increased from Approximately 5 billion to 7 billion in 2004-2005 **while FDI also increased proportionally 5.31 Bn to 1.02 trillion Hake, m. Et.al** exports and the FDI stock using a panel of industries and seven EU countries for the period 1973-2004 and found positive significance in 1738 observations (hake, et.al, 2008). In Chinese studies found by Zheng from panel data from India and China and found POSITIVE significance of export performance with FDI. As per the IMD rankings China is ranked 1 in terms of (IMD, 2013). In terms of export performance recording $1898 Billion, ranked 4th in terms

of exports in commercial services, 40th in terms of exports goods as a percentage to total

export sales (IMD, 2013). **TE depicted a medium positive significance, recording high**

correlations of 0.796 (rank 31) but low contributions of 0.031%(rank 59), is

significant variable due to literature support and also that it displays on the IMD

strengths index which is used by the author as cross reference to this study. It

depicts that Total exports worked favorably in Malaysia in recent times (IMD,

2013)**Infact t**he results of FDI impact on growth show that "FDI has a positive and

significant impact on growth for four south Asian countries. Other significant factors that

contribute to growth are exports, gross domestic capital formation and infrastructure.

Therefore South Asian countries need to improve their domestic investment, exports and

infrastructure facilities, along with more foreign investment, to achieve higher growth".

Further, FDI has a positive impact on export growth through its positive spillovers for

South Asian countries. Though FDI does not affect domestic investment in the current

period, it has a positive and significant impact affect over time through dynamic effects

exports of goods as % of GDP was 81.5% as of 2013 according to IMD which is the 5th

best as per all IMD countries in the world and is strength of Malaysia. As per IMD the

country policies are toward globalization generally is ranked number 4th in the world high

tech exports percentage of manufactured exports is rank 4th, (IMD, 2013)

Resource Seeking FDI

5.13 FDI Determinants related to Natural resource and Unit labor cost

Natural resources has a high positive significance recording high correlations of

0.839(rank 5th) that the more abundant natural resources are in China will attract

FDI. For example in 2004 to 2005 NR increased from 3.08 to 4.34 while proportionally FDI increased 5.31 Bn to 1.02 trillion These findings are similar to by Sowkut et al (2008) studied the FDI flows in Africa and found that the wealth of natural resources is reported to be positive and significant (supporting the presence of resource-seeking FDI) is similar to studies conducted by Pradhan and saha, (2007), Aseidu (2008) and many others. In Natural resource rents in China have increased from 3.3% to 4.3% as percentage to the world total. Empirical Chinese FDI studies conducted by Zihu ma et.al suggest a positive impact of NR on FDI. As per Bunyaratavej, 2007 China is becoming reliant on input goods and energy. Infact China has undertaken a variety of natural resource FDI deals in a variety of regions spanning from Asia to Africa. As the Author says " Chinese attempt to protect the supply of raw materials and energy for its national economy which was according to Zweig (2006) defined as "diplomatic activity designed to enhance a nation's access to resources and its energy security." The most important resources for China include "While the first and foremost resource for China is oil, the country is also in great demand for other minerals such as copper, bauxite, uranium, aluminium, manganese, and iron ore, etc. (see, e.g., Taylor (2007)). As pointed out by Taylor, "the strategy chosen is basically to acquire foreign energy resources via long-term contracts as well as purchasing overseas assets in the energy industry." These strategic choices also apply to other key natural resources. Furthermore China is full of natural resources and that is a big reason of why they attract so much FDI. They are known for having an abundance of natural resources such as coal, iron, steel, aluminium, and land. These factors are important determinants for FDI inflows to China as can be seen from the projects associated with developing oil and mineral deposit exploitation".

((Bunyaratavej, 2011)) **NR depicted had a medium positive significance, recording high correlations of 0.509 (rank 30), but medium contributions of 0.794 (rank 32), suggesting the increase in NR will impact FDI favorably in the long run in Malaysia. When FDI was an increasing trend from 176 billion to 993 billion was when NR increased from 5.57 to 10.13 between 2000-2005. When NR decreased FDI decreased subsequently. NR as per studies conducted by** Sowkut et al (2008) studied the FDI flows in Africa and found that the abundance of natural resources is reported to be positive and significant (supporting the presence of resource-seeking FDI) and is in line with studies done by Pradhan and saha, (2007), Aseidu (2008) and many others, while the negative association was tested using GMM and Panel data and Knoshita et.al 2002 he finds a negatve significance relationship. As per Bunyaratavej, 2011 natural resources can provide a country with cost advantages as the abundance in the country improves that position. Therefore TNC's will preffere to locate in countries that can provide them with these advantages especially for large TNC's competing in the global market in price. Therefore the larger the level of NR the greater the level of FDI, however it has to be remembered that it is always based on the expectation of the investor (Bunyaratavej, 2011). The more natural resources a country have a positive significance on FDI but this dependents on the level of abundance in the country. Renewable technologies (solar energy, wind turbines, etc.) are quickly turned into competitive advantages (survey) rank 6th. Future energy supply is adequately ensured is ranked 8th in the world (IMD, 2013) Technological regulation supports business development and innovation survey rank 8th.However climate change is being sufficiently addressed by your government survey ranked Malaysia at number 9 in the world. (IMD, 2013)

- LR depicted had a medium positive significance, recording low correlations of 0.042 (rank 68), but high contributions of 3.748 (rank 6), suggesting the increase in LR will impact FDI favorably in the long run in Malaysia. In a country with the weakest IMD indicators for female employment, Employment as % of the population, labor productivity and overall productivity is among the lowest among countries, but the labor relations are generally known to be competitive in Malaysia. Infact its relationship with FDI is best described by Brown (2000) warns of biased estimates when not taking in to consideration other control variables and hence can lead to negative or no significance. Most estimates have weak regressions but find a positive significance between LR and FDI in the study by Sarna et.al 2005 that conducts a regression analysis and finds this association but saw it as a very weak determinant. The expected outcome is that LR encourages FDI in this study and corresponds with Sarna et.al 2005 findings. As per an expert opinion survey they found it effective labour regulations as an important characteristic in Malaysia ((IMD, 2013)) legal and regulatory framework support the competitiveness of enterprises survey placed Malaysia at number 6th (IMD, 2013) however female labor force as percentage of total labour force which is ranked 53 and labour force percentage of total labor force 48th (IMD, 2013)

- UCL had a medium negative significant impact on FDI recording high correlations of -0.667(rank 21) and medium contribution of 0.661% (rank 33rd). This implies that if unit cost of labour increases that negatively affects FDI in China. These Findings are similar to Callaghan and Wei studies that indicate a negative significance in

labor cost. His results reveal a new general trend of rapidly growing labour costs in coastal China. Therefore, future low labour-cost seeking FDI projects have been directed to China or Vietnam. From a Chinese point of view, the first alternative is preferred although this depends very much on the quality of the infrastructure and on overall policies. In essence this confirms UNCTAD's view that China is losing its competitiveness as a low cost production centre to countries like Vietnam and Thailand. Therefore this confirms that higher UCL are not encouraging FDI in China. UCL has a negative high significance, recording correlations of 0.802 (rank 8) and high contributions 3.64% (rank 10), suggesting that when UCL increases it will reduce FDI its impacts may be in the long run in India. For example between 2007 to 2008 when FDI increased from 842 Bn to 2.42 trillion, UCL decreased from 10.75 to 9.41 depicting the inverse relationship. These Findings are similar to Callaghan and Wei studies that indicate a negative significance in labor cost. He finds that EU FDI tends to be more high-tech than other foreign investment, regions with a higher development rate, higher skills (and therefore higher labour costs) are more attractive for foreign investors but in developing countries UCL is more important and the higher it is the country becomes less attractive to FDI. Within Indian specific studies it was found by Hansel who conducted a comparative study between India China found a negative significant relationship between FDI and UCL. There weakness in India was its unit labor costs in the manufacturing sector scoring 10.5 with a rank of 44. (IMD, 2013) UCL has a negative high significance, recording correlations of 0.802 (rank 8) and high contributions 3.64% (rank 10), suggesting that when UCL increases it will reduce FDI its impacts may be in the long run. For example between 2007 to 2008 when FDI increased from 842 Bn to 2.42 trillion,

UCL decreased from 10.75 to 9.41 depicting the inverse relationship. These Findings are similar to Callaghan and Wei studies that indicate a negative significance in labor cost.Within Indian specific studies it was found by Hansel who conducted a comparative study between India China found a negative significant relationship between FDI and UCL. There weakness in India was its unit labor costs in the manufacturing sector scoring 10.5 with a rank of 44. (IMD, 2013) **UCL depicted had a medium negative significance, recording low correlations of 0.242 (rank 47), but high contributions of 1.596 (rank 28), suggesting the increase in UCL will impact FDI unfavorably in the long run.** As per OECD studies the "use average wage rate and unit labor costs as measures of labor costs studies (Bellak et al. (2007), Fung et al. (2002), Cheng and Kwan (2000), Lucas (1993), Culem (1988), Schneider and Frey (1985), Flamm (1984)) finds that higher wages which leads to higher unit costs discourage FDI inflows, some studies found wages to be insignificantly and even positively related to FDI inflows (Owen (1982), Gupta (1983), Wheeler and Mody (1992). (OECD, Foreign Direct Investment for Development: Maximizing benefits and minimizing costs, 2002). Therefore the expected outcome is that higher UCL discourages FDI which aligns with the results for Malaysia.

5.13 FDI determinants related to skilled labour)

-CB depicted had a high positive significance, recording high positive correlations of 0.619 (rank 24) and high contributions of 1.646 (rank 26), suggesting that increasing CB will impact FDI favorably in both the short and long run. For example when CB Steadily decreased from 2001-2010 from 0.28 to 0.02 and FDI subsequently increased and decreased from 176 billion to negative inflows of -434. this decreasing trend of both variables is be sty explained by IMD where in the executive opinion survey depicts effective labor regulations was strong opinion which means in this type of environment collective bargaining should prosper. Unemployment legislation is an incentive work survey saw Malaysia at number 3 positions (IMD, 2013)

- SL was having a medium negative significance, recording correlations of 0.719 (rank 16) and medium contributions of 1% (rank 32), suggesting that as UCL increases it will discourage FDI in India. For example between 2007 to 2008 when FDI increased from 842 Bn to 2.42 trillion, SL decreased from 10.75 to 9.41 depicting the inverse relationship. Rashmi Banga explored this relationship finds a variety of determinants of significance in which availability of Skilled labour is one such determinant. He find that "cost factors are more important determinants for FDI from developing countries e.g., it is not the availability of skilled labour (in terms of higher secondary enrolment rate or higher labour productivity) but lower cost of labour along with undervalued exchange rates that are significant determinants" ((BANGA, 2003)) In

terms of youth unemployment India was placed amongst the best holding the 18th position furthermore employment was a weak indicator recording 55th position with an index score of only 38 for such a large population (IMD, 2013) per the IMD India is number 1 in terms of compensation levels for manufacturing (wages + supplementary benefits), US $ 0.8 billion rank 11, remunerations in service professions 1.2 billon (Gross Annual income including bonuses) rank 3, flexibility and adaptability of people are high when faced with new challenges survey placed India at 9th position scoring 7.6, Remuneration of Management where the total base salary for plus bonuses and long term incentives US $ 1.0 Billion ranked 12th in the world were the strengths of the country. However The Imd also classified that India's labour productivity ranked 59th, labour force as percentage to the population 40.3% ranked 55th in the world and the level of female labour force percentage of population 40.3% ranked 52 was the weaknesses of the labour market. (IMD, 2013) The labour market has ready engineers and Information technology specialists. ITS was having a high negative significance, recording correlations -0.835 (rank 3) with a high contribution of 3.010% (rank 15) in India. For example in 2007-2008 when FDI increased from 8.2 Bn to 2.42 trillion, ITS decreased from 8.75 to 8.09 depicting the inverse relationship. The findings are best described by Raj Kumar who suggests "Foreign direct investment (FDI) is one of the key drivers of globalization, along with trade and portfolio flows such as debt and equity, all of which, together with the information, communication and technology (ICT) revolution, are major forces in increasing the process of global business activity". He further goes on to state that if the impact is stronger the more technologically advanced the industry/sector hosting the foreign investment then a positive correlation should take place but in India's

case not all sectors have this absorptive capacity hence it has negative correlation ((Kumar, 2003)) as per IT people are readily available survey placed India among 14th in the world. (IMD, 2013). **From an Indonesian perspective FHSKL depicted high positive significance, recording correlations of 0.748(rank 18) and high contributions of 4.932 (rank 2).** For Depicting this increase for example the increase in FDI 2009 to 2010 was from 489 Bn to 1.3 trillion while FHSKL increased from 5.44 to 5.66 infact from 2002 it has been increasing from 4.74. Priyarphan explains that FHSKL is spillover effect of FDI using a Gravity model he proves these phenomena, while hon. tang finds via regression techniques that in Malaysia those foreign skilled workers were information providers and linked in market seeking FDI. Even SL though having a low correlation had significantly high contributions which means it had positive significance the contribution was 2.444% ranked 3rd largest correlation. This can be attributed to having high rankings for relocation of services is not a threat to the economy Indonesia were ranked 10th and was a strength. While its unemployment rate was placed as 24th in the world and is a strength. Foreign high skilled people are attracted to business people are attracted to business environment survey was placed 21st, remuneration of service professionals were number 1 in the world, compensation levels were 3rd in the world and remuneration of management including total base salary plus bonuses and long term inventive were placed 8th in the world. Working hours were 2172 according 9th position in the world. (IMD, 2013) However labour productivity was unsatisfactory at 58th position in the world, labour relations were amongst the worst and female labour force to total employment was 49th in the world at a mere 38.3% of total employment(tong, 2005). **From a Malaysian viewpoint therefore the right supply of SL , FHSKL & ITS is**

important; the variables depicted had medium positive and 2 negative significance levels respectively, recording low correlations of 0.170 (rank 56) & -0.197(rank 52) & -0.435(rank 33), but high contributions of 1.646 (rank 26) & 4.01% (rank 5) & 3.562 (rank 9) , suggesting the increase in SL will impact FDI favorably in the long run while the negative outflows have resulted in FHSKL & ITS having seen negative relationships. Priyaphan explains that FHSKL is spillover effect of FDI using a Gravity model he proves these phenomena, while hon. tang finds via regression techniques that in Malaysia those foreign skilled workers were information providers and linked in market seeking FDI. While ITS was best described by Raj Kumar who suggests "Foreign direct investment (FDI) is one of the key drivers of globalization, along with trade and portfolio flows such as debt and equity, all of which, together with the information, communication and technology (ICT) revolution, are major forces in increasing the process of global business activity". He further goes on to state that if the impact is stronger the more technologically advanced the industry/sector hosting the foreign investment then a positive correlation should take place. As per the executive opinion survey the skilled workforce was one of the strengths of Malaysia. as per the IMD relocation of services and production is not a threat to the economy ranked number 1 in the world, Unemployment and Long term Unemployment was both better than average and was at 4th position.. However the weaknesses were when Employment was at 53rd levels (IMD, 2013) Cyber security is being addressed by corporations survey is 9th in the world (IMD, 2013) total expenditure on R&D expenditure total % of GDP ranked 42nd in the world which is below par (IMD, 2013) From **a Chinese view point Information technology was medium positive significance recording high correlation of**

0.545(rank 34). This implies that if information technology skills increased it would attract FDI. For example ITS increased from 6.31 to 6.60 while FDI increased 5.31 Bn to 1.02 trillion Based on the findings of Zhao who finds a low positive significance between work experience but however states that FDI generates positive externalities on technology, skilled labor, and intermediate goods suppliers. He further goes on to state results also indicate that skilled workers are very expensive for nonstate firms in China therefore automation using ITS has become prevalent in Chinese manufacturing sectors. In fact the IMD suggests that the china is ranked 7th in terms of high tech exports as percentage ranks 7th in the world with an index value of 25 and seventh in the world in terms of active employment with a country that has one of the lowest unemployment rates in the world it quite clear why skilled labour did not feature as a determinants factor, as in a socialist government most are employed on the long run where the state will benefit welfare to the citizens (IMD, 2013) However attracting and retaining talent, remuneration of management and service professions is a strength of China and investing in these types of Jobs could be attractive in China bringing weight to these findings (IMD, 2013)

- SET had a high positive significance recording low correlations of 0.801(rank 7th) and high contributions of 2.218% (rank 16th) implies that more secondary school enrolment will impact FDI positively. For example SET increased from 94.1 to 95 while FDI increased from 700 million to 1.2 trillion. As Per Marcell's 2011 findings recent findings have highlighted the constraints faced by foreign firms in their activity due to a lack of physical infrastructure, and skilled workers compared to firms supplying the domestic market (Kinda 2009). This would give us reasons to suggest that secondary

and tertiary FDI are positively correlated with secondary and tertiary school enrolment. These types of FDI need greater levels of education than primary FDI since their supply consists of manufacturing and services, associated with a larger presence of skilled workers in their production functions. As per the IMD China is amongst the lowest in terms of public expenditure on education and is an area that the government can address on the long run (IMD, 2013)

5.14 FDI determinants related to patents, technology and other created assets

Research and development had medium positive contributions (rank 3rd). This suggests that on the long run FDI will be positively affected by R&D development. For example if we take a long term position in 2000 FDI was at 3.634 Billion with R&D recording 0.95% of GDP but in 2008 FDI had increased to 1.4 trillion and R&D had increased yearly but was at 1.4% of GDP. These findings As per Nicolini study conducted on FDI determinants in the European Region find that's R&D was positively significant in the European Region for FDI. These findings align with our studies. As per the IMD China is amongst the third in the world for relocation of R&D services and is slowly building their momentum on R&D with it being less of a threat to the economy showing that domestically there is enough research and development to suffice the nation. China is ranked among the highest 17th in terms of business expenditure on R & D and total expenditure on R &D. High correlations may not be evident as China is known to be poor in adoption of technology scoring a rank of 53rd position in the world for technology regulation (IMD, 2013) **RD had the highest negative correlation of -0.961 with the number 1 rank in correlations, as Malaysia**

depicted the highest relocation of R&D facilities is not a threat to the future of your economy survey saw Malaysia in 2nd position. However total R&D personnel nationwide per capita full time work equivalents (FTE) per 1000 people rank 46th in the world is and below the world average (IMD, 2013) However the negative significance Norback using three stage optimization technique finds negative significance with R&D and FDI. (UNCTAD, 2011). (Nicolini, 2006) The Author of this dissertation believe that RD did not feature and had low correlations and medium contributions because most R and D is being transferred out of Malaysia, where IMD has that India is ranked 4 in all indexes including relocation of R&D services, Relocation of services and Relocation of production is amongst the highest in India hence R and D should have a tendency to spread outward FDI flows and not inward flows which won't show up in this reports model.

-Technology index was having a medium significance recording high correlations (rank 43) of 0.416 and medium contributions (rank 34) of 0.558%. This implies that if technology increased in China it will increase FDI proportionately. As per Liu 2011 The global demand for high-tech goods has risen and it relationship is positive, effects on productivity and competitiveness when used throughout economy. Consequently, FDI in manufacturing industry in China is aligned now more towards the high technology and/or capital intensive rather than long-established low-techn and/or high labour intensive manufacturing industry. Liu states, "the FDI in textile industry decreased from US$2.11 billion in 2005 to US$1.39 billion in 2009. On the other hand, FDI in medical and pharmaceutical products industry increased by 43.9 percent to US$ 0.95 billion, compare with US$0.66 billion in 2008. Thus, China should attract more high technology

manufacturing FDI". Since the determinants of FDI in high and low technology manufacturing are different, for example high technology manufacturing FDI is attracted by labour quality rather than labour cost, one should be careful in using aggregate data FDI in manufacturing industry due to the fact that more comprehensive and accurate information is necessary for policy maker or investor (Liu, 2011)). Therefore it is no surprise as IMD suggests that the China is ranked 7th in terms of high tech exports as percentage ranks 7th in the world with an index value of 25 showing the importance of the sector in the economy both in a global and local sense. (IMD, 2013). **Tech was having high positive significance in Indonesia, recording correlations of 0.685 (rank 27) and high contributions of 1.711% (rank 23), suggesting that increased technology will have a spill over effect with FDI in China.** For example when FDI increased for 692 billion to 931 billion in 2010 Tech index increased from 72 to 88 indicating positive effect on FDI. It has also been stated that FDI's have been essential for creating technology and management practices transfers, and innovation and skills enhancement, as well as for accessing international marketing networks (Priyaphan, 2009) Patentforce had a negative high significance, recording correlations of 0.499 (rank 35) and high contributions of 3.317% (rank 9), suggesting that the increases in patents in force will reduce FDI. However we find this data insignificant as the setting on the test has little data and indicates little as XLSTAT estimates the missing variable

Patent was positive high significance recording a positive correlation 0.653 (rank 24) and 4.79 (rank 7) respectively. This implies that when the number of patents increase this would result in FDI increasing. The positive significance is best shows by Zhang et.al 2009 using uneven regional distribution of foreign direct investment (FDI) across Chinese provinces from 1995 to 2006.he finds a positive correlation using Factor analysis and other econometric techniques. As one of the important drivers of competitiveness, innovation effort and performance in China are not even across the regions. Again, there is a significant gap in innovation between the coastal and inland regions. In 2004, the coastal provinces accounted for 82 percent of China's total invention patent applications, 79 percent of the total sales of new products, and 73 percent of total industrial R&D expenditure. The innovation activity in the coastal provinces is based on FDI further concentrated in several provinces including Guangdong, Shanghai, Jiangsu, Shangdong and Zhejiang ((Fu, 2008)) **Patentforce had a negative high significance, recording correlations of 0.499 (rank 35) and high contributions of 3.317% (rank 9), suggesting that the increases in patents in force will reduce FDI.** However we find this data insignificant as the setting on the test has little data and indicates little as XLSTAT estimates the missing variable.

5.15 Determinants related to Physical Infrastructure

Roads, railroads, Distribution, mobile and telephone had medium, medium and telephone had positive significance with low to high significance levels with the highest significance depicted with mobile and lowest with distribution . This suggests that FDI will be positively affected by the increase of the determinants for

Physical infrastructure. For example when paved roads increased from 0.19 to 0.35 while FDI increased 5.31 Bn to 1.02 trillion during the 2004 to 2005 period. As per Xinzhong on his study on FDI determinants in regional and rural China see's the traditional determinants of FDI in China but Importance has to go along with improving the infrastructure and education level of China, the more developed infrastructure and high human capital in the developed central or coastal cities in China have become the important location determinants of FDI inflows aiming to be huge production sites for sustaining long-run manufacturing and distribution centres.(Xinzhong, 2005) However the Telephone was highly significant from all three variables and hence was important as suggested by Ranjan et.al who looks at FDI determinants in BRIC countries and finds in China has a positive significant impact in terms of telephone lines per 100 people had a positive significant impact in China ((Agrawal, 2011)**As per Kent et.al** "Structural changes in the economy include improving physical infrastructure. Availability of road network, water, electricity, telecommunications, and other resources provides opportunity for TNC's to produce, move goods and services efficiently, and minimize costs to that they can compete globally on a cost advantage". Furthermore he states "Strategic infrastructure means location, content, and a strategic intent to organize economic activity in an emerging market. The infrastructure should be strategic to reflect on the existing demographic realities. It should be strategic to the extent that Sectoral composition should complement demographic realities. Age, availability, and educational skill set of the labor force should be reflected in the strategic infrastructure. The strategic infrastructure should have connectivity with the hinterland to obtain continuous supply of cheap labor from backward areas. The specified area should be self contained and have

world class infrastructure such as hotels, airports, banks, stock markets, retail stores, educational institutes, recreational facilities, etc. The infrastructure can be strategic if it has proximity to the largest global markets and has connectivity with the global shipping network. Such economic clusters are strategic in every sense of the system for merit". In terms of telephone infrastructure china is ranked among 4th among investment in telecommunication activities, therefore the author has picked mobile telephone as significant even though it had low significance in dual model it depicted in high positive correlations of 0.798 ranked among 13th in terms of correlations and china was among 9th highest in the world in terms of mobile telephone costs, 58th in the world in terms of mobile telephone subscribers. AS per the expert opinion survey China's reliable infrastructure scored about 25.34 points and was midterm priority in China but a strong infrastructure nevertheless ranking 29th in terms of overall infrastructure as per the IMD rankings. (IMD, 2013) **Railroads, Quality of air, distribution, Telephone, mobile were all having medium to high positive significance with medium to high correlations and contributions, but the highest recorded was distribution which recorded highest correlations of 0.455 (rank 35) and high contributions of 4.406(rank 4), next was telephone variable while the other variables too showed high correlations but less contributions in India**. However the findings related to Physical infrastructure has been found to be very significant for India, Who are building new distribution channels called ,Nagesh Kumar Analyses the function of infrastructure availability in determining the investor confidence for a countries FDI inflows for export based production. He finds that the investment by the governments in providing efficient physical infrastructure facilities improves the investment climate for FDI. He does this via a constructing

composite index and taking data for 66 countries and finds that infrastructure index was highly significant in his findings and finds positive contributions. ((Kumar, 2003)). However Physical, financial and technological infrastructure: Infrastructure comprising transport, electricity, communication networks, education, health facilities and other forms are significant determinants of FDI. MNEs are more likely to be attracted to areas with good infrastructure. For example, Sinha (2007) found the significant impacts of port based infrastructure and its proximity on FDI as it lessens inland transportation and reduce costs. Lack of investment in infrastructure, on the other hand, deters FDI (Unknown, 2013)India was amongst the number 1 in Telecommunications infrastructure as percentage of GDP, lowest mobile telephone costs ranked 2nd in the world however the weaknesses were that it had weak mobile telephone and internet subscribers per 1000 people ranked 59th, computers per capita 59th Furthermore basic infrastructure did not allow the common man to access it adequately survey placed India 57th and were the weaknesses in India (IMD, 2013) However Since all variables have positive indexes improving these areas in a calculated fashion will result in positive FDI flows. **From the determinates of Physical infrastructure Indonesia depicting high, medium and medium significance levels in water transportation, telephone and mobile, recording correlations of 0.722 (rank 24), 0.808 (rank 46) and 0.839 (rank 9) and high contributions of 4.078%(rank 6), 0.862%(rank 43) and 0.902%(rank 37). While distribution infrastructure also showed medium positive significance, recording medium correlations 0.352 (rank 46) and medium contributions 0.682 (rank 43), suggesting that if infrastructure increased it will encourage FDI in Indonesia**. (Priyaphan, 2009) suggests that Physical infrastructure facilities for transport of the raw

materials out of the host country and on to final destinations (e.g., roads, ports, power, and telecommunication) are another key factor of attraction to resource-oriented FDI (Priyaphan, 2009). to the "top of the list of the investing nations is Singapore with a share of 26.3%, followed by Japan, USA, Netherlands and South Korea. Most foreign investment in 2011 was channelled into the transportation, warehousing and telecommunications sectors (19.5%), mining (18.6%), and electricity, gas and water projects (9.5%), most of which were located in Greater Jakarta, West Java and Banten".(OCTAGONA, 2012) As per the IMD however depicted that water transportation(Harbors, canals, etc.) in Indonesia that it is efficient were it was ranked 56th and it was a weakness. Furthermore the distribution infrastructure of goods and services is generally efficient is ranked 57th and is another area of concern for Indonesia. . Indonesia's ranking on infrastructure is still far behind and only moved up two notches from 84 to 82. Specifically, roads were ranked 84th, ports 96th and electricity supply 97th. (IMD, 2013). **Water transportation and Distribution depicted medium negative significance, recording low to mid correlations 0.129 (rank 62) & 0.360 (rank 39), and high contributions of 2.94 %(rank 17) & 2.53%(rank 19), suggesting Physical infrastructure based FDI is negatively influencing FDI in the recent years. As per the IMD database the expert points out that infrastructure is an important variable in fact the human, technological, scientific and basic needs meet the needs of business**). Priyaphan suggests that Physical infrastructure facilities for transport of the raw materials out of the host country and on to final destinations (e.g., roads, ports, power, and telecommunication) are another key factor of attraction to resource-oriented FDI (Priyaphan, 2009) Physical, financial and technological infrastructure: Infrastructure

comprising transport, electricity, communication networks, education, health facilities and other forms are significant determinants of FDI. MNEs are more likely to be attracted to areas with good infrastructure. For example, Sinha (2007) found the significant impacts of port based infrastructure and its proximity on FDI as it lessens inland transportation and reduces costs. Lack of investment in infrastructure, on the other hand, deters FDI (Unknown, 2013).

Efficiency seeking FDI

5.16 FDI determinants related to GFCF and productivity

Operational productivity scored a medium significance with high correlations and medium significance. Depicting that higher OP will increase FDI. **As per the study conducted by** Oberhofer and Pfaffermayr (2011) find a significant positive relationship between FDI and OP in the ASEAN using panel data and regression. Therefore the expected outcome a higher a countries productivity will encourage FDI positively. However as per the IMD overall productivity is under par scoring US $ 9759 per person and even labor productivity was amongst the worst. (IMD, 2013)

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Operational productivity was showing high positive correlation of 0.900(rank 1) and high contributions of 2.364 (rank 17), suggesting that increased productivity will fuel FDI in Indonesia. For example when OP increased from 9248.9 to 9588.9 FDI increased from 439 billion to 1.3 trillion. Priyaphan using a gravity model identifies suggests that operational productivity important variables relating to the fluctuation of FDI. Nigeria (a country which shares many features with Indonesia). Despite the positive signs of operational productivity on its effects on the economy Indonesia was placed 58th in the world for operational productivity with value of 10071.3 dollars which was below the world average. (IMD, 2013)

5.17 FDI determinants related to input costs and other input costs

In terms of Exports of goods and services has a high positive significance is seen as its high negative correlation -0.869(rank2), with high contributions of 6.746 (rank 1) this implies that if exports of goods and services increase then FDI will decrease proportionately in China. However with the Yuan easing the relationship with the economy is unseen in this case. Exports of goods and Services have lingered around the 96 billion mark in 2000 and increased to 97 billion in 2010 while FDI rose from 400 bn to 1.24 trillion in that period. These Findings are similar Zhang using Chinese panel data at the provincial level in the period of 1986±1997. The finding suggests a positive relationship FDI positively affect provincial manufacturing export performance. "It showed that exports generated by FIEs have become more and more significant, with a share increasing dramatically from 0.05% in 1980 to 12.58% in 1990 and 45.5% in 1999. No doubt, inward FDI is playing an important role in promoting

China's exports. Examining the spatial patterns of exports and FDI, this paper found that both of them concentrated in the coastal areas". Over 85% of exports came from the coastal areas and more than 85% of inward FDI went to these areas. In terms of the IMD ranking exports of commercial services ranked number 4t in the world for commercial services valued $182 billion. Exports of services had a high negative significance with negative correlations of 0.432 and high 2.532% contributions suggesting that increased Exports of services are having a negative effect on FDI In Malaysia. In fact exports of commercial services as a percentage of GDP is less than world average and is ranked 54th in the world. (IMD, 2013) Relocation of services however as mentioned earlier is not a threat to the economy of Malaysia (IMD, 2013)

In terms of Cost of living and Apartment showed a high negative significance, recording a high correlation of -0.736 (rank 16) & -0.427(rank 41) and high contribution of 5.599% **(rank 3) & 5.56%(rank 4) which implies that increased cost of living decreases FDI significantly. These findings are similar to Lelavati et.al who states using a case analysis finds that countries in the BRIC are determined by the rate of Inflation, which has a negative significance and states the following "**Sayek Selin (1999) explained the negative relationship between inflation and FDI. Higher inflation causes low inflow of FDI in host country. Hymer's (1960) market <u>imperfection</u> hypothesis postulated that FDI was the direct result of an imperfect global market environment. This approach successfully analyzed the 'tariff jumping' FDI which was prevalent in the countries encouraging import substituting industrialisation policies (most emerging and BRIC countries) in the late seventies. In the eighties there

was a need to explain the rising volumes of FDI despite the world markets becoming increasingly". **This is further Justified by UNCTAD who state that the comparative advantages companies use to have in china in terms if production costs are reducing, Thailand, Vietnam and other emerging markets have become the new low cost production centers** Inflation is the home economy's will have a negative influence on China's inward FDI done by Ping Zheng and Hui Tan in there linear regression done study on Chinese Inward FDI determinants found a significant negative relationship to FDI and COI. Consumer price inflation is among one of the problems in China recording 5.4% with 49th position in the IMD rankings. Exports of services had a high negative significance with negative correlations of 0.432 and high 2.532% contributions suggesting that increased Exports of services are having a negative effect on FDI. In fact exports of commercial services as a percentage of GDP is less than world average and is ranked 54th in the world. (IMD, 2013) Relocation of services however as mentioned earlier is not a threat to the economy however (IMD, 2013)

In terms of fixed telephone saw medium positive significance recording high correlations of 0.428 (rank 41) indicating that higher the level of Fixed telephone tariffs, the greater the leval of FDI in China. However the author finds this figure to be misleading as increased input costs are not associated with higher FDI. However as seen prior to this it was proven that Fixed telephone lines per 100 people have increased and since the fixed telephone charge in China is 0.3, it can be stated that with increased telephone lines it has effected this inversely. In terms of fixed

telephone tarrifs China is ranked 15th in the world with competitive fixed telephone tarrifs and 13th in terms of broadband tariffs (IMD, 2013) Fixed telephone, Electrical costs and adequacy of communications all recorded high positive significance, recording correlations of 0.868 (rank 6), electrical costs 0.810 (rank 12) while its contributions were 1.873% (rank 22), 4.461% (rank 4) & 4.979% (rank 1) respectively. This is best **described Zurawiki, 2009 who conducted a regression analysis on a study on Kenya from 2000-2010 while positive significance in certain years. al Electrical costs were significant in Malaysia positively and Singapore negatively. Therefore the expected outcome is that higher fixed telephone costs are associated with lower FDI flows. However Priyaphan says the significance can be negative or positive for these types of flows, due to global events like Chinese input costs increasing making other destinations low cost manufacturing centers UNCTAD. Priyaphan states that** other input costs such as transport and communication costs. This was also another reason why imports of imports of ICT equipment recorded medium significance recording correlations of 0.747 (rank 19) and contributions of 1.061 (rank 31). Electrical costs for industrial clients US$ per Kwh is only 0.1 ranked 11th in the world, fixed telephone tariffs Us $ per 3 minutes local call (peak) 0.0 20, fixed broadband tariffs monthly fee US $ 21.5 rank 23 and Mobile telephone costs prepaid mobile cellular tariffs US$ per minute local call, off-net 0.2 rank 23rd were strengths and give weight to our findings. (IMD, 2013)

Imports of ICT has medium positive significance recording correlation of 0.747 (rank 9) and contributions of 1.061% (rank 31), suggests that increased imports of ICT imports increases FDI. As per IMD however the number of broadband subscribers is 8.1 of number of subscribers per 1000 inhabitants were placed 59th in the world which was a weakness but also other weaknesses such as the country also had low computers per capita for the number of computers per 1000 people was 49.7 ranked 58th and also in terms of internet users the number of internet uses per 1000 people is 200.3 ranked 57th.

Energy Use showed high negative correlations showing negative significance, recording high negative correlations 0.851 (rank 10) & low contributions. The variable was picked on importance based on authors view and IMD ranking of being an important variable of Malaysia and depicted that Malaysia had high energy intensity consuming 13793.1 Kilo Jules per year ranked 52nd overall. As per the studies conducted by Hellier et.al 2010 found a positive significance in Energyusepercapita using panel regression and other significant econometric models. Therefore Countries with abundant cheap and skilled labor, electricity and energy and countries with improved infrastructure, such as road, port facilities, telephone and internet might significantly and negatively affect the cost of doing business. Thus the availability of cheap and skilled labor, electricity and **energy** and infrastructure thus can significantly affect the inflow of FDI by attracting cost cutting and efficiency seeking FDI (e.g., UNCTAD, 1998; Kinda, 2010). Energy intensity commercial energy consumed for each dollar of GDP kilojoules 13793.1 is ranked 52nd in the world. (IMD, 2013)

Fixed telephone, Electrical costs and adequacy of communications all recorded high positive significance, recording correlations of 0.868 (rank 6), electrical costs 0.810 (rank 12) while its contributions were 1.873% (rank 22), 4.461% (rank 4) & 4.979% (rank 1) respectively. This is best **described Zurawiki, 2009 who conducted a regression analysis on a study on Kenya from 2000-2010 while positive significance in certain years. al Electrical costs were significant in Malaysia positively and Singapore negatively. Therefore the expected outcome is that higher fixed telephone costs are associated with lower FDI flows. However Priyaphan says the significance can be negative or positive for these types of flows, due to global events like Chinese input costs increasing making other destinations low cost manufacturing centers UNCTAD. Priyaphan states that** other input costs such as transport and communication costs. This was also another reason why imports of imports of ICT equipment recorded medium significance recording correlations of 0.747 (rank 19) and contributions of 1.061 (rank 31). Electrical costs for industrial clients US$ per Kwh is only 0.1 ranked 11th in the world, fixed telephone tariffs Us $ per 3 minutes local call (peak) 0.0 20, fixed broadband tariffs monthly fee US $ 21.5 rank 23 and Mobile telephone costs prepaid mobile cellular tariffs US$ per minute local call, off-net 0.2 rank 23rd were strengths and give weight to our findings. (IMD, 2013) **Fixed telephone and Adequacy of communication showed medium negative significance, recording correlations of 0.226 (rank 49) & 0.345 (rank 40) and high contributions 3.557% (rank 10) & 2.889% (rank 18). As per the expert opinion survey by the IMD the cost competitiveness was an important variable in Malaysia. Described Zurawiki, 2009**

who conducted a regression analysis on a study on Kenya from 2000-2010 while positive significance in certain years. al Electrical costs were significant in Malaysia positively and Singapore negatively. Therefore the expected outcome is that higher fixed telephone costs are associated with lower FDI flows. However Priyaphan says all these variables are considered to have an impact in the ASEAN furthermore the significance can be negative or positive for these types of flows, due to global events like Chinese input costs increasing making other destinations low cost manufacturing centers UNCTAD. Investment in telecommunications as a percentage of GD was ranked 7th in the world (IMD, 2013)

Imports of ICT has medium positive significance recording correlation of 0.747 (rank 9) and contributions of 1.061% (rank 31), suggests that increased imports of ICT imports increases FDI. As per IMD however the number of broadband subscribers is 8.1 of number of subscribers per 1000 inhabitants were placed 59th in the world which was a weakness but also other weaknesses such as the country also had low computers per capita for the number of computers per 1000 people was 49.7 ranked 58th and also in terms of internet users the number o internet uses per 1000 people is 200.3 ranked 57th.

5.17 Classification of all variables as per Dunning Criteria

If we aggregate the weight of all score and depicted in a spider graph, it shows that Host country FDI policy, asset seeking, efficiency seeking are the most important variable classifications in all countries except for Malaysia which depicted higher weights for business facilitation. Positive FDI flows are associated with countries

with a higher combination of asset seeking, Efficiency seeking are associated with positive FDI flows except for Malaysia which saw a different combination of FDI determinants namely host country FDI policy and business factors were more prevalent and was associated with more negative FDI inflows(FDI Outflows) (UNCTAD, 2011) figure 8 depicts the initial positions, and then based on dunnings classifications it is clear that China leads everyone as it has concentrated on input cost(efficiency seeking FDI type), technology and innovation and tax policy and international agreement. As we know China showed postive net flows of FDI and while Malaysia composition also changes as its focus is on standards of treatment and its hassle costs are highas shown below in the spider diagram and hence has opened the country to investments abroad while net negtive outflows were seen in the tested panel data. Still Malaysia and Indonesia too have similar compositions in weight to that of China and has positive FDI flows. By looking at diagram 9 . Furthermore Malaysia and Indonesia have a greater compositon of resource based FDI types portraying more openess, raw materials and skilled labour based FDI seems to be within the minds of both TNC and other importatnt investors. However India still has a reliance on the traditional vaiables as seen in figure 9. Truly figure 9 is a great comparative tool and explains why nations policy direction shapes global investment flows. The index has been successful in portraying Dunning paradigm and other graphical features from xlstat has been put in appendix I which depicts correlation maps and the regrssion line to the variables. It can be seen that most varibles have a strong relationship with FDI and its regression line in most countries under the selected index of variables.
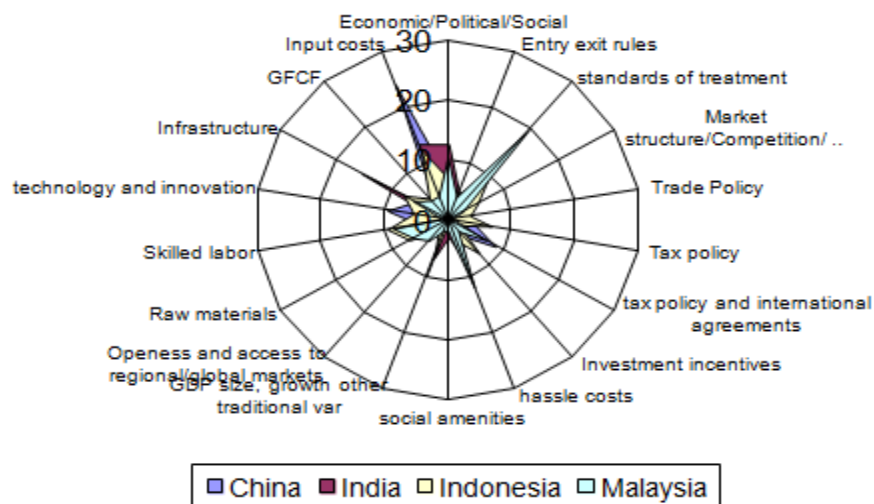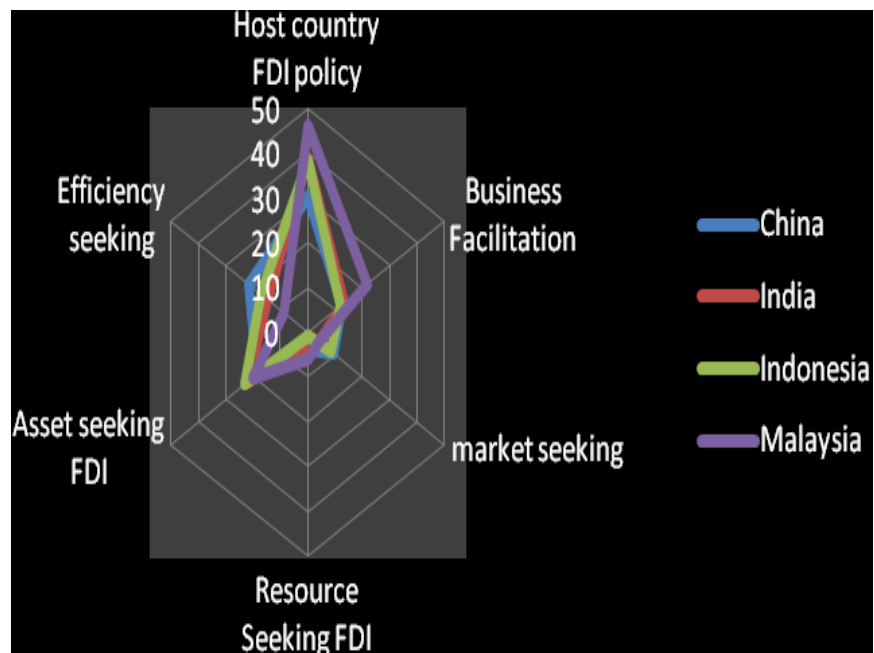
Figure 8 and 9: Spider diagram of catergories of FDI determinants and Sub determinants of FDI

6.0 Conclusions and main findings

The paper set foot to ascertain the most important determinants of FDI in the South, East and South East Asia. It was found that 31 variables from China, 33 variables from India, 36 Variables from Indonesia and 34 variables from Malaysia had 37 significance to be considered as Determinants of FDI flows as shown on in table 16. If we aggregate the weight of all score and depicted in a spider graph, it shows that Host country FDI policy, asset seeking, efficiency seeking are the most important variable classifications in all countries except for Malaysia which depicted higher weights for business facilitation. Positive FDI flows are associated with countries with a higher combination of asset seeking, Efficiency seeking are associated with positive FDI flows except for Malaysia which saw a different combination of FDI determinants namely host country FDI policy and business factors were more prevalent and was associated with more negative FDI inflows(FDI Outflows) (UNCTAD, 2011)

Main Findings Summary

Country	R square	Positive significance	Negative significance
China	98.8%	PS, MEII, PSC, M&A,CL,COI,II,QL, GDP growth, GDP per capita, IIWRB, TE, NR, ITS, SET, R&D, Patent, TECH, Roads, Railroads, Distribution, mobile, WFDIS, Exports of goods and services, Fixed telephone	MTR, CTR, TRSB, UCL, Energyuse per capita, COL
India	99.7%	MEII, SD*, AFC, CBV, FFI, CL, II, GS, GB, QL, GDP growth, Rail roads, quality of air, distribution, telephone, mobile, OP, COL, Exports of services	ERS, RFCT, FI, ACM, MTR, DTT, CTR, GDP per capita, UCL, SL, ITS, Energy costs, Energy use per capita
Indonesia	101.5%	MEII, ERS, M&A, Greenfield, FFI, ACM, IPS, CTR, II, CC, QL,GDP growth, GDP per capita, IIWRB, FHSKL, Patentforce,	RFCT, FI, FC, CL, MTR, COI, EODB,

		TECH, Water transportation, Telephone, mobile, OP, energy use per capita, fixed telephone, electrical costs, adequacy of communications, Imports of ICT	
Malaysia	**100%**	**CCR, PS, ERS, SD, RFCT, PSC, FI, CTR, II, GS, BC, EODB, TE, GDP growth, WFDIS, NR, LR, R & D, SL, FHSKL, ITS, CB, Water transportation, Distribution**	**AFC, M&A, FFI, DTT, GS, QL, GDP per capita, UCL, SET, R&D, fixed telephone, Adequacy of communications, Energy Use**

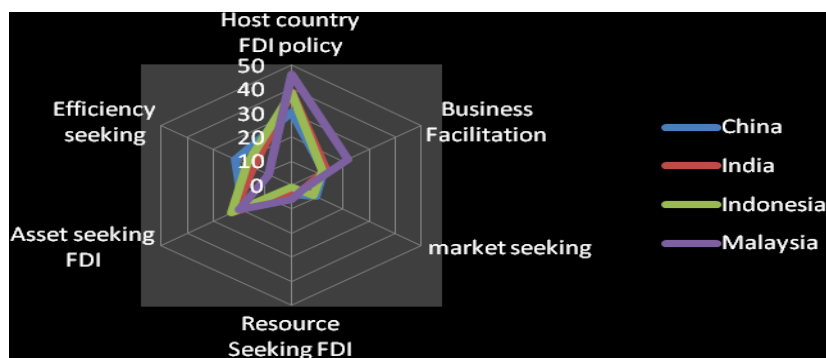**Table 5: Combined results in terms of variable significance**

Figure 10: Combined PCA scores for all countries

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Appendix A: PLS and PCA methodology

Partial least squared regression

Regression is used as a descriptive tool in three types of situations. First it is used as often to develop a self weighting estimating equation by which to predict values for a criterion variable from the values for several predictor variables. Thus in this study author tries to consider FDI as the dependent variable to 70 other independent variables. To Avoid problems of Multi Co linearity in the data while it takes in to account data structure the best to test this outcome is partial least squares regression. Since Xlstat and Stata has a function of corresponding all the response variables and good visualisation power it has been chosen as the software for this report

a.1 Defining

"Partial least squares was brought forward by the Swedish mathematician <u>Herman Wold</u>, who then developed it with his son, Svante Wold. A substitute term for PLS (and more correct according to Svante Wold) is *projection to latent structures*, but the term *partial least squares* is still dominant in   many areas. Although the original applications were in the social sciences, PLS regression is today most widely used in <u>chemometrics</u> and associated   areas. It is also used in sensometrics, bioinformatics,

anthropology and neuroscience. In contrast, PLS path modelling is most often used in social econometrics, marketing, sciences, and strategic management" (CHIH-YOUNG, 2009).

"**Partial least squares regression (PLS regression)** is a method that bears some relationship to principal components regression; it conducts a linear regression model by projecting the predicted variables and the observable variables to a new space compared to finding hyperplanes of minimum variance amid the response and independent variables,. Because both the *X* and *Y* data are projected to new spaces, the PLS family of methods are known as bilinear factor models. Partial least squares Discriminant Analysis (PLS-DA) is a variant used when the Y is binary. PLS is used to find the fundamental relations between two matrices (*X* and *Y*), i.e. a latent variable approach to modeling the covariance structures in these two spaces. A PLS model will try to find the multidimensional direction in the *X* space that explains the maximum multidimensional variance direction in the *Y* space. PLS regression is particularly suited when the matrix of predictors has more variables than observations(this study portrayed this), and when there is multicollinearity among *X* values. By contrast, standard regression will fail in these cases. The PLS algorithm is employed in PLS path modelling, a method of modeling a "causal" network of latent variables, as the word 'causal' has to put in quotes because causes obviously cannot be determined without experimental or quasi-experimental methods. This technique is a form of structural equation

modeling, distinguished from the classical method by being component-based rather than covariance-based". ((Filzmoser, 2008)

a.2 PLS consideration

."multiple-block structure of variables can be analyzed when PLS path modelling and the data has the following characteristics: causal relationship, small sample, missing values, or displays multi-colinearity. A flexible framework also enriches data analysis methods with non-parametric validation procedures (such as K variances) for estimated parameters and fits indices for different blocks that are more classical in a modelling approach than in data analysis. In our study it was found that the x variables were highly correlated among each other. **Multicollinearity** is a statistical phenomenon in which two or more predictor variables in a multiple regression model are highly correlated. In this situation the coefficient estimates may change erratically in response to small changes in the model or the data. Multicollinearity does not lessen the projecting power or reliability of the model as a whole, at least within the sample data; it only affects calculations regarding single predictors. That is, a multiple regression model with correlated predictors can indicate how well the entire bundle of predictors predicts the outcome variable, but it may not give valid results about any individual predictor, or about which predictors are redundant with respect to others. A high degree of multicollinearity can also prevent computer applications from performing the matrix inversion required for computing the regression coefficients, or it may make the results inaccurate to a certain magnitude. Therefore, the model used to estimate this study was the PLS path method was the proffered choice" (Bookkamana, 1999). Farrar et.al 1967)

A.3 Modelling procedure

First step is the standardization process. The observation matrix X is standardized to 00 1 0 ; and the single dependent variable Y is standardized to

the second step is to extract components. Extract components tk(k=1,2,…,m). Based on the formula (1), we calculate by iteration.

In formula 1, , is residual matrixes, which came from every fitting of standardized independent variable.

The rk, the fitting equation coefficient of the k-th component, iterates following formula (2). is the residual vector, which came from every fitting of standardized dependent variable. n formula (2), is the residual vector, which came from every fitting of standardized dependent variable**(Mei et.al, 2008)**

Therefore the fitting equation in step k-th is as below:

The third step is the cross validation test [10]. In the analysis above, we got one fitting equation per iterative calculation. The best equation in forecast ability should be chosen as the final model. The cross validation test is used in testing the forecast ability of the fitting model; it is to firm the number of the PLS components. Got a set of all the sample points except for a certain sample point i, and used PLS components to fit a regression equation. Then substituted

the sample point i into the regression equation, we got the fitting value k (- i) y of Y at the sample point i. Repeated the test above at every sample point, i = 1,2 , …, n. Finally, we attained the PRESS (Prediction Residual Error Sum of Squares)

(Mei et.al, 2008)

We adopted all the sample points to fit regression equations which contained k components. ki y ∧ represented the sample point. The regression equation contained PLS components.

(Mei et.al, 2008)

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The Methodology and Data

Please note the 70 variables used for the above equation its Abbreviations & factor classifications from CCR(Composite Country Risk) to GS (government Subsidies), measurements used for the study, expected outcomes from previous literature and the ex related to the study have been defined in section 2 of this report. This was input in to Xlstat and the findings will be shown in the next section of the report.

The data to be used was stated in the methodology section but will primarily include time series panel data between 2000-2010 for the 5 country sample are collected using a mixed method approach to research is conducted gathering secondary data from the World Bank Statistics, International Financial Statistics (IFS) of the International Monetary Fund (IMF) and the Global Market Information Database (GMID). The leading economic indicators and other general macroeconomic data include gross domestic products (GDP), manufacturing output, exchange rate, consumer price index (CPI), total exports and total imports from the Global Market Information Database (GMID), and the Bloomberg database, UNCTAD and Central Bank annual reports of all countries will be used for supplementing this study . Furthermore primary data analysis will be conducted post testing where interviews with specialists in the field of Finance and economics will help make meaning to the results.

(Mei et.al, 2008)

Appendix B Principal Component Analysis

Definition

"PCA was invented in 1901 by Karl Pearson.[1] Now it is mostly used as a tool in exploratory data analysis and for making predictive models. PCA can be done by eigenvalue decomposition of a data covariance (or correlation) matrix or singular value decomposition of a data matrix, usually after mean centering (and normalizing or using Z-scores) the data matrix for each attribute.[2] The results of a PCA are usually discussed in terms of component scores, sometimes called factor scores (the transformed variable values corresponding to a particular data point), and loadings (the weight by which each standardized original variable should be multiplied to get the component score) .The principal component analysis (PCA) is a data reduction technique that distils the essence of several variables into a smaller number of components which explain the variance in the data. The regional and country variables listed above showed correlations but rather than reject them they are converted into a two factor composite, M&A attractiveness value one factor for regional attractiveness and one factor for country attractiveness. The principle of parsimony (simplicity and reduction) is followed by creating an attractiveness value out of the variables, in this way more meaningful and richer measure is created and the dimensions of the data set become more manageable" (Siegel, 2000 ,Berenson & Levine, 1986).

"The Eigen analysis is the name of the mathematical technique used in PCA. Eigen values show the percentage of variance explained by each component, the largest Eigen

value is the first principal component, the second largest Eigen value is the second principal component, and so on. (unknown, 2012)The Eigen values for our study were determined; these values were then plotted on a scree plot to illustrate the importance of each of the components. A factor analysis was then performed on the all the variables in . The PCA analysis will create factors by reducing the data into its underlying dimensions. These factors allow for an attractiveness score to be generated for each variable in each category for each country. This will be used for interpretation."

 (Ismail, 2009)

PCA consideration

"Since many of the variables showed high correlation among them, mainly those belonging to the same type of determinants, a Principal Component Analysis was applied in an iterative manner and in a different order, depending on the economic sense of the extracted factors. The purpose of this analysis was to simplify the construction of the index, reducing the number of variables as much as possible with the least loss of information". (Carlos et.al 2009)

PCA procedure for index creation

On the basis of the data and country sample introduced in the previous section, the index calculation can now be conducted. Nando et.al (2005) give a good overview about how to construct a composite indicator. The index calculation methodology used in this paper

follows the approach of Nando et.al (2005) topic"tools for composite indicator building) and can be divided into four steps as shows in the table 5 below. This paper, therefore, concentrates on the most common methods to calculate an index (Jakulin, 2004)

The four step process

Step 1:Consistentsy analysis	Step 2: Normalization and Standardization	Step 3: Weighting	Step 4: Aggregation
Cronbar Alpha	Z scores	Equal Weighting	Linear
Bartlett test	Rescaling	Factor analysis	Geometric

Table 6: 4 Step PCA process

The following sections briefly describe the techniques used to analyze the index consistently, to normalize and standardize data, to determine the weights of the indicators, and finally to aggregate them to obtain the index results. The results are sensitive to the technique used for the calculation. Therefore, we use different combinations of the proposed methods to calculate the index. The explanation will be put forward in the findings sections. Below in table 5 depicts the methods of calculating the index.

Method	Normalization and Standardization	Weighting Scheme	Aggregation
1	Z score	Equal	Linear
2	Rescaling	Equal	Linear
3	Rescaling	Equal	Geometric
4	Rescaling	Factor Analysis for the key drivers, equal weights for the level 2 and 3 sub indices and data series	Geometric

Table 7: Calculating the index

Cronbar Alpha is applicable for an estimate of the internal consistency of items in a model or survey. It assesses the degree of the correlations among a set of variables and is used within this report to evaluate how well a set of sub-indices measures a single unidimensional Object.

Cronbar Alpha is Zero if no correlation exists and the sub-indices are independent. If the Underlying items are perfectly correlated, it is equal to one. A High Cranach Alpha is a sign that the underlying items substitute the desired variable. According to Nunnally (1978), a Value of 0.7 is an acceptable threshold. Bartlett test of Spherity reveals weather the correlation matrix is not an identity matrix and therefore can be factorized. The tests should be below the 0.05 significance level. The significance levels will be depicted country by country in the section PCA model significance.

The next step is to normalize and standardise. Initially all data points will be normalized based on the Z scores and this approach is mainly used because of their desirable characteristics. Therefore this report will follow this formula:

Z scores convert the underlying data to a common normally distributed scale, with a mean of zero and standard deviation of 1. this leads to the results that variables with extreme values have a great value on the index.

The rescaling method is used to normalize index items to an identical range by linear transformation. When the rescaling method is used, all variables of the particular sub-indices are converted to a scale from 1-100point, where 100 represents the best score and 1 represents the worst. It is defined as:

Rescaling is vulnerable to extreme values or outliers that can distort the transformation. However it can widen the range of indicators lying within small intervals than using z-score transformations. Considering the authors data, where the values of the variables are

rather close to each other for some determinants, the rescaling method seems the most appropriate.

After normalization and Standardization was completed, the weightings of the index have to determine before the aggregation can be conducted. We follow two schemes

In addition to normalization and Standardization of the data series, the weightings of the index items have to be determined before aggregation takes place. To do so 2 methods are used equal weight method determined by the factor analysis on the level of the FDI fluctuation and can be then classified in to factors as mentioned in section 2. This is a straight forward scheme and since this method does not differ to a great extent from the one resulting in factor analysis.

When using factor analysis, each component is assigned a weight according to its contribution to the total variance in the data. This ensures that the resulting summary indicators account for a large part of the cross-country variance of the underlying items. Nicoletti etl.al (2000) Highlight that the properties of a factor analysis can be found in Hair et.al (1998). Nardo et.al discusses the advantages and disadvantages of factor analysis. They describe that the basic idea behind factor analysis is that it might be possible to describe a set of Q variables in terms of M factors. This will be shown country by country in this section from China onwards.

Analysis of Index Consistency

With the Consistency analyses we demonstrate that the raw data and the ready-made indices are consistent for their aggregation. However, they are recommended poor to

factor analyses to determine wither the factor analysis is plausible. Literature, such as RayKov, Cortina, Feldt et.al amply covers the Cronbar Alpha and other measures like the Bartlett test of Sphericity. To do so the author had to conduct a variety of tests both in Xlstat and Stata, therefore all the resulting indicators used a combination of variety of tests in both K variances to find Barleet test of Sphericity and the measure of sampling adequacy; while Cronbar Alpha was part of the Factor Analysis regression due to limitations in the computer. However it must be noted that both K variances and Cronbar alpha and Bartlett tests are calculated the same way even in PCA analysis.

Appendix C statistical procedure on software

Using Xlstat, the rotation method employed to extract the factors was Varimax Normalization with Bartlett test significance higher than 0,05. Furthermore we also considered the Cronbar Alpha values which were more than 80% to be a significant model. We substituted missing values by the mean because this is the suggested criteria

when there are few missing cases. We used the Comrey criteria for factor adjustments. When a variable does not show a clear belonging to a factor we face complex variables. They do not contribute to identifying the nature (interpretation) of the factors in which they have their principal weights. The best option is to withdraw them (so they explained variance improves and is easier to interpret). Besides, when a factor is highly correlated with only one variable, it is considered that it is insufficiently defined. It is than convenient to make a new analysis with one factor less. Another criterion to construct factors has been the economic sense of the variables grouped by principal components. If the aggregation of variables does not have a meaning it has been also rejected. With the 70 variables (hard and soft) considered we tried to perform a factor analysis by principal components with all of them together. The factors extracted were rejected because of some of the above criteria were not meet.

(Carlos et.al, 2009)

China

PLS Model significance

The table below details on regression results. *R*-squared is generally used in explaining the variance in either FDI stock or inflows, which is accounted for by the explanatory variables. The values of the *R*-square of the model are 0.958 , for this testing of Chinese FDI, suggesting that the overall explanatory power of the model is very strong. Despite shortcomings owing to the short span of available data, this pioneer study does present an initial insight into Chinese FDI determinants in terms of home-country macroeconomic variables.

Goodness of fit statistics (Variable FDI):	
Observations	11.000
Sum of weights	11.000
DF	7.000

R2	0.988		
Std. deviation	5063933839.939		
MSE	16318543776993500000.000		
RMSE	4039621736.870		
Model quality:			
Index	Comp1	Comp2	Comp3
Q2 cum	0.669	0.788	0.839
R2Y cum	0.801	0.960	0.988
R2X cum	0.401	0.542	0.630
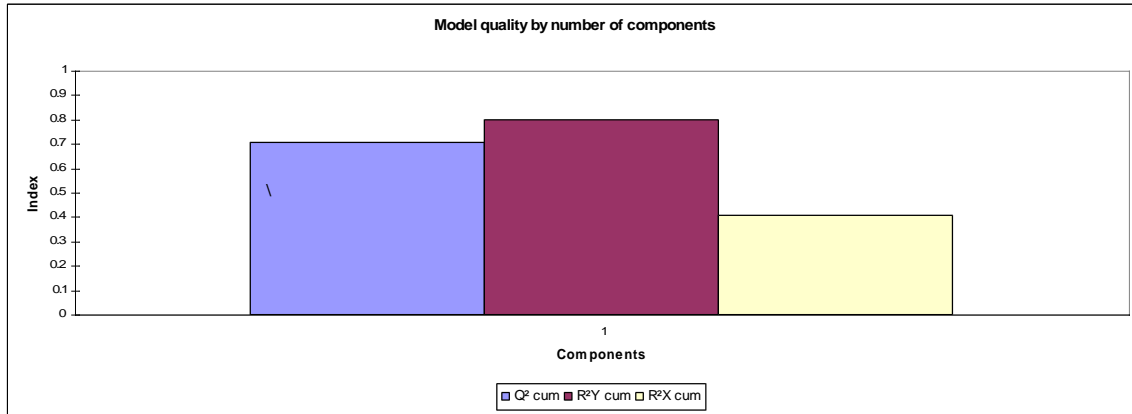
Figure 11 and table 8: PLS output model significance various tables and graphs China

The Q² cumulated index measures the global goodness of fit and the predictive quality of the 83.9 models. XLSTAT-PLS has automatically selected 3 components. We see that Q² remains high with 3 components and is at 83.9 percent predictive quality. This suggests that the quality of the fit slightly and is perfect for interpretation. The cumulated R²Y and R²X cum that correspond to the correlations between the explanatory (X) and dependent (Y) variables with the components are very close to 1 with 1 components. This indicates that the 3 components generated by the Partial Least Squares regression summarize well both the Xs and the Ys 63.3% based on 3 factors (XLSTAT, 2013)The first correlations map allows to visualize on the first two components the correlations between the Xs and the components, and the Ys and the components. We can see that for some judges displayed at the centre of the map, the correlations are low. By looking at the corresponding table, we see that for example, the Energy use per capita judge is only correlated with the first component that is globally little correlated with the explanatory variables.

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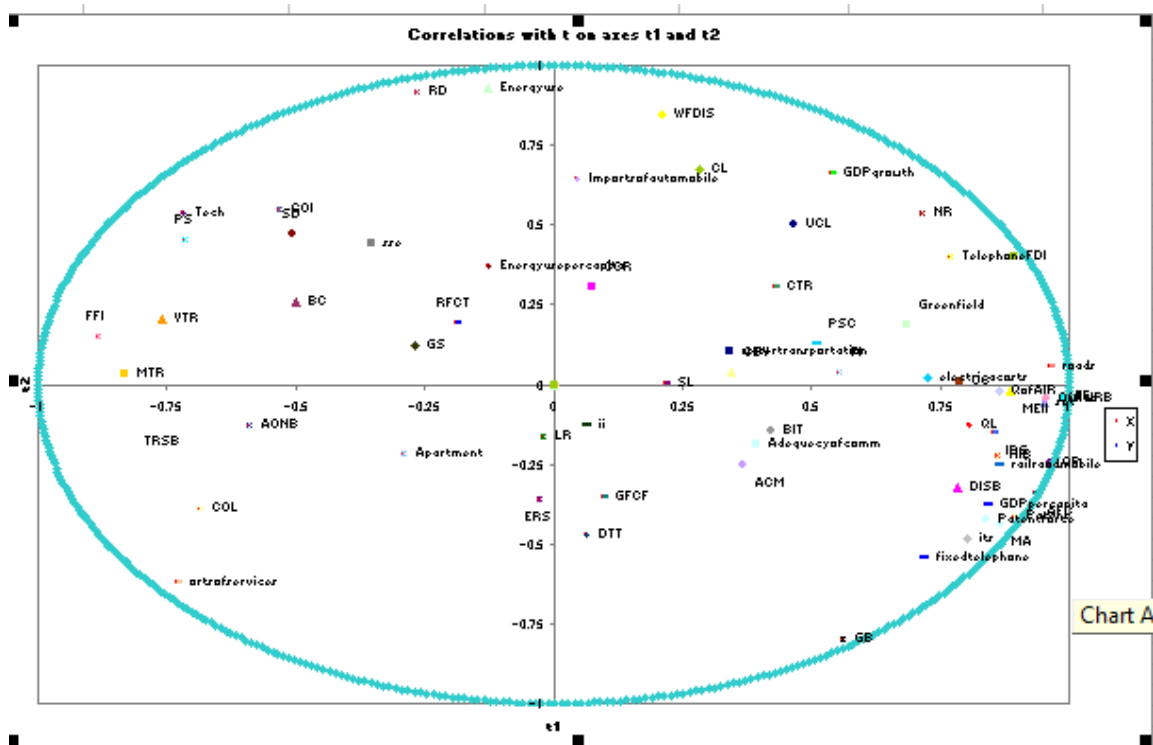
Figure 12: correlation map

Regarding the explanatory variables we notice that the apartment is not well represented on the first two dimensions. We can interpret this as the fact that this variable explains only little the preferences of the judges, which is not surprising as it does not have a strong effect on FDI or other criteria that could easily influence the judges' preference in China. We notice the strong correlations between the Physical infrastructure variables such as railroads and quality of air infrastructure and variability in tariff rate, between the two railroads, and the negative correlation between variability in tariff rates. One should also notice how different the judges are: they are not concentrated on one part of the correlations circle, but well distributed all around it. The map that displays the dependent variables on the c vectors, and the explanatory variables on the w* vectors allows to visualize the global relationship between the variables. The w* are related to

The weights of the variables in the model
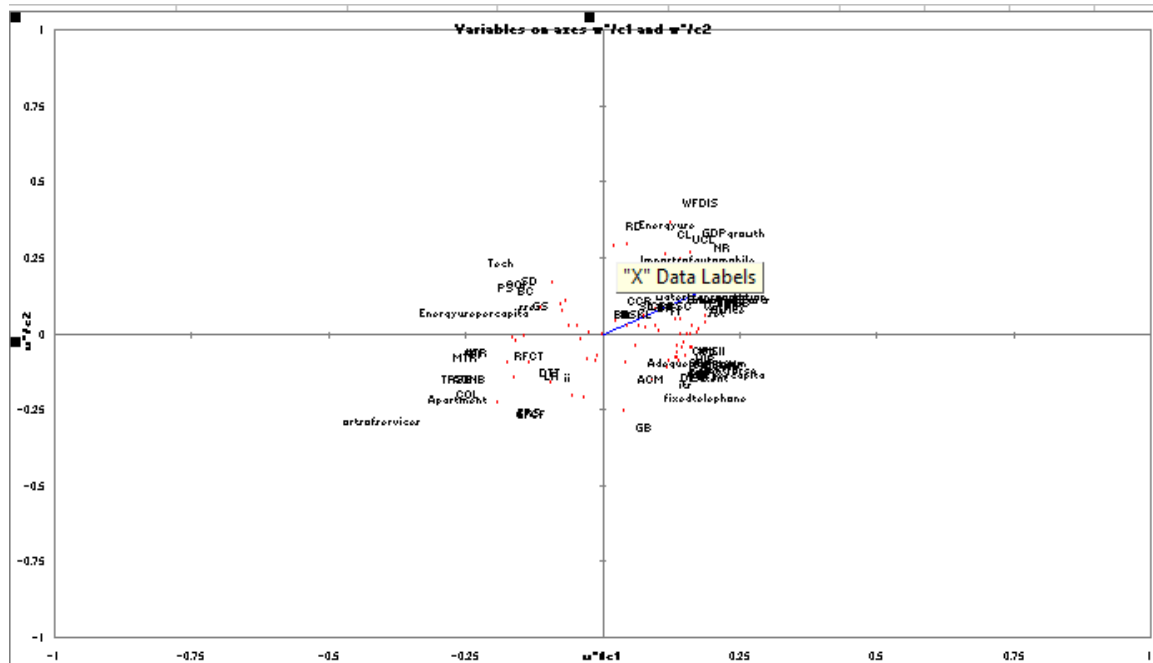
Figure 13: Xlstat output

If one projects an explanatory variable on the vector of a dependent variable, we have an idea of the influence of the explanatory variable in the modelling of the dependent variable. A new correlations map allows superimposing the products on the previous correlations map.
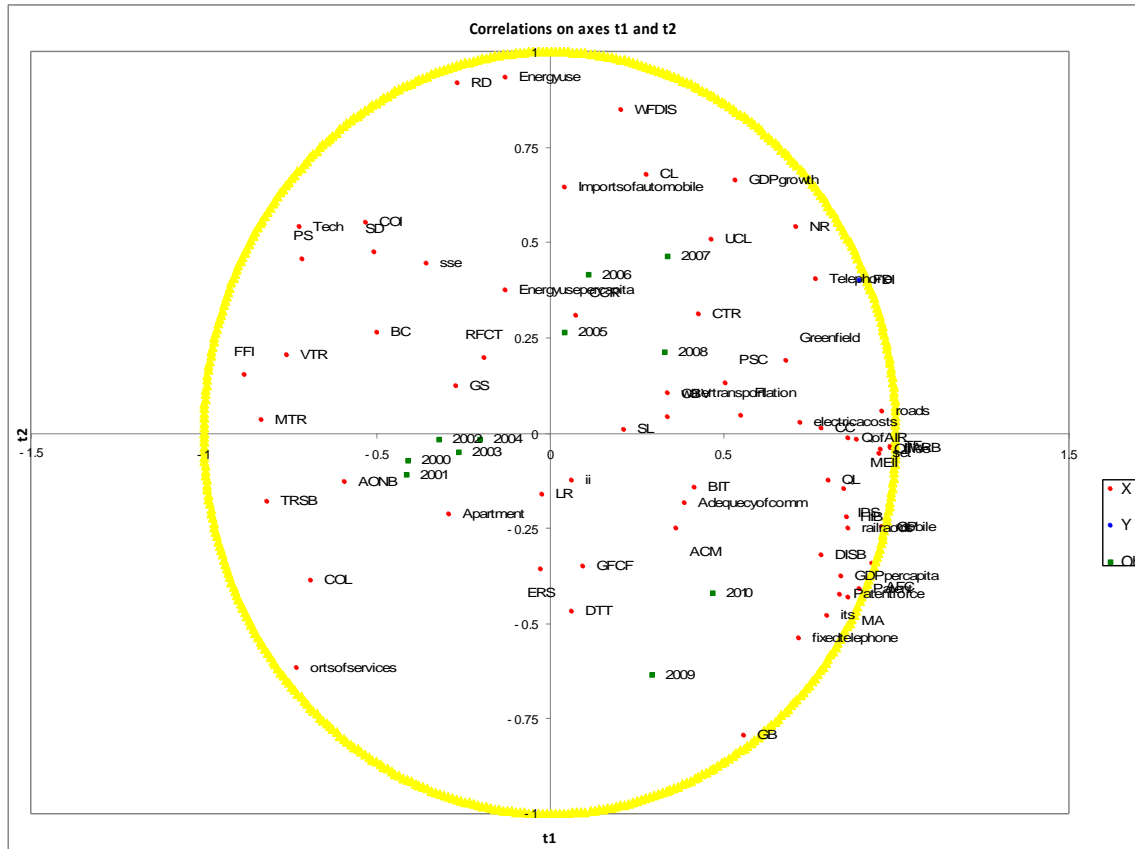
Figure 14 : Xlstat output

(XLSTAT, 2013)

2 PCA model Significance

The first results that are displayed are the summary statistics of the selected variables, and the correlation matrix between the variables. We can see that some of the correlations are quite high (-0.568 for DTT). The standardized Cronbach's alpha is computed for the whole input table. An alpha of 0.842 means that there is low redundancy among the variables and the overall data seems to be correlated and is a good estimation for FDI. The Bartleet's Test scores were shown below indicates p value of less than 0.0001 showing high model significance and depicts that the data is not an identity matrix but is not an identity matrix hence can be factorised.

Bartlett's test / Two-tailed test:	
Chi-square (Observed value)	0.000
Chi-square (Critical value)	0.000
DF	70

p-value (one-tailed)	< 0.0001							
Alpha	0.05							
Eigenvalues:								
	F1	F2	F3	F4	F5	F6	F7	F8
Eigenvalue	29.559	10.491	7.214	5.346	4.251	3.300	2.531	1.919
Variability (%)	44.118	15.659	10.767	7.979	6.344	4.925	3.778	2.864
Cumulative %	44.118	59.777	70.544	78.523	84.868	89.793	93.571	96.435

Figure   14:

Various

output for PCA								

Table 9 – principle component analysis output

The reproduced and residual correlation matrices allow verifying if the factor analysis model is fine or not, and where it fails to reproduce correlations. The next table shows the eigenvalues resulting from the factor analysis. We can see that with 1 factor explains 44.118% of the data but if 5 factors are involved we keep 84.8 % of the variability of the initial data can be explained but with 10 factors 100% of the data can be explained

Since the results of the factor analysis which merits discussing. The high Cranach Alpha and Bartlett test mean that the key drivers are adequate for joint proxies to a single latent factor. They are unidimensional, and express ne characteristic. The economic interpretation of this result is that our choice of key drivers is appropriate for our purpose to assess FDI as per 5 criteria including host country FDI policy, Business Facilitation, market seeking, Efficiency seeking FDI, Asset Seeking FDI and resource seeking as depicted in section 2.5 (the variables)

From these results, we can understand that the determinants that have high scores on the first factor are Strong FDI determinates, while for other FDI determinants such as Fixed Telephone with high coordinates on the first and second factors might be more

appropriate. The following chart gives the position of the variables on axes F1 and F2. Other charts mixing other factors can be displayed.

XLSTAT output

(Xlstat, 2013)

Appendix E: Indian results

India PLS scores

Table   bellow gives details on regression results. *R*-squared is generally used in explaining the variance in either FDI stock or inflows, which is accounted for by the explanatory variables. The values of the *R*-square of the model are 0.997, for this testing of Indian FDI, suggesting that the overall explanatory power of the model is very strong. Despite shortcomings owing to the short span of available data, this study does present an initial insight into Indian FDI determinants in terms of home-country macroeconomic variables

Goodness of fit statistics (Variable FDI):	
Observations	11.000
Sum of weights	11.000
DF	6.000
R2	0.997
Std. deviation	472050913.865

MSE	121544762880661000.000			
RMSE	348632704.835			
Model quality:				
Index	Comp1	Comp2	Comp3	Comp4
Q2 cum	0.631	0.734	0.789	0.925
R2Y cum	0.783	0.923	0.979	0.997
R2X cum	0.371	0.527	0.629	0.721
Figure 16: PLS output and graphs: India				

table 10 – principle component analysis output

The Q^2 cumulated index measures the global goodness of fit and the predictive quality of the 92.5% of the model. XLSTAT-PLS has automatically selected 4 components. We see that Q^2 remains high with 4 components and is at 92.5 percent predictive quality. This

suggests that the quality of the fit slightly and is perfect for interpretation. The cumulated R²Y and R²X cum that correspond to the correlations between the explanatory (X) and dependent (Y) variables with the components are very close to 1 with 1 component. This indicates that the 3 components generated by the Partial Least Squares regression summarize well both the Xs and the Ys 72.1% based on 4 factors (**Xlstat, 2013**). The first correlations map allows visualizing on the first two components the correlations between the Xs and the components, and the Ys and the components. We can see that for some judges displayed at the centre of the map, the correlations are low. By looking at the corresponding table, we see that for example, the Energy use SSE judge is only correlated with the first component that is globally little correlated with the explanatory variables...

PCA model significance India

1The first results that are displayed are the summary statistics of the selected variables, and the correlation matrix between the variables. We can see that some of the correlations are quite high (0.890 for MEII). standardized Cronbach's alpha is computed for the whole input table. An alpha of 0.908 means that there is low redundancy among the variables and the overall data seems to be correlated and is a good estimation for FDI. The Bartleet's Test scores were shown below indicates p value of less than 0.0001 showing high model significance and depicts that the data is not an identity matrix but is not an identity matrix hence can be factorised.

Bartlett's test / Two-tailed test:	
Chi-square (Observed value)	0.000
Chi-square (Critical value)	0.000
DF	70
p-value (one-tailed)	< 0.0001
Alpha	0.05

Eigenvalues:							
	F1	F2	F3	F4	F5	F6	F7
Eigenvalue	27.501	12.780	8.431	5.932	3.691	3.274	2.880

Variability (%)	38.734	18.000	11.875	8.355	5.198	4.611	4.056
Cumulative %	38.734	56.734	68.609	76.965	82.163	86.774	90.830

xx

Figure 15: Various output for PCA: India

The reproduced and residual correlation matrices allow verifying if the factor analysis model is fine or not, and where it fails to reproduce correlations. The next table shows the eigenvalues resulting from the factor analysis. We can see that with 1 factor explains 44.118% of the data but if 5 factors are involved we keep 84.8 % of the variability of the initial data can be explained but with 10 factors 100% of the data can be explaine

Appendix F: Indonesian results

Indonesia

PLS regression model significance Indonesia

Table 3 gives details on regression results. *R*-squared is generally used in explaining the variance in either FDI stock or inflows, which is accounted for by the explanatory variables. The values of the *R*-square of the model are 01.015 , for this testing of Indonesian FDI, suggesting that the overall explanatory power of the model is very strong. Despite shortcomings owing to the short span of available data, this pioneer study does present an initial insight into Chinese FDI determinants in terms of home-country macroeconomic variables.

Goodness of fit statistics (Variable FDI):	
Observations	11.000
Sum of weights	11.000
DF	6.000
R²	1.015
Std. deviation	132602021.344
MSE	10383684214589000.000
RMSE	101900364.153

Model Quality:					
Index	Comp1	Comp2	Comp3	Comp4	
Q² cum	0.757	0.825	0.956	0.973	
R²Y cum	0.857	0.982	1.011	1.015	
R²X cum	0.412	0.535	0.643	0.728	
Figure 22: PLS output and graphs:					

Table 11 – principle component analysis output

The Q² cumulated index measures the global goodness of fit and the predictive quality of the 97.3 models. XLSTAT-PLS has automatically selected 3 components. We see that Q² remains high with 4 components and is at 97.3 percent predictive quality. This suggests that the quality of the fit slightly and is perfect for interpretation. The cumulated R²Y and R²X cum that correspond to the correlations between the explanatory (X) and dependent (Y) variables with the components are very close to 1 with 1 component. This indicates that the 3 components generated by the Partial Least Squares regression summarize well

both the Xs and the Ys 72.8% based on 4 factors (Xlstat, 2013). The first correlations map allows visualizing on the first two components the correlations between the Xs and the components, and the Ys and the components. We can see that for some judges displayed at the centre of the map, the correlations are low. By looking at the corresponding table, we see that for example, the Energy use per capita judge is only correlated with the first component that is globally little correlated with the explanatory variables.

PCA model significance India

The first results that are displayed are the summary statistics of the selected variables, and the correlation matrix between the variables. We can see that some of the correlations are quite high (0.827 for MEII). The standardized Cronbach's alpha is computed for the whole input table. An alpha of 0.906 means that there is low redundancy among the variables and the overall data seems to be correlated and is a good estimation for FDI. The Bartleet's Test scores were shown below indicates p value of less than 0.0001 showing high model significance and depicts that the data is not an identity matrix but is not an identity matrix hence can be factorised.

Bartlett's test / Two-tailed test (FDI):	
Chi-square (Observed value)	0.000
Chi-square (Critical value)	0.000
DF	68
p-value (one-tailed)	< 0.0001
alpha	0.05

The reproduced and residual correlation matrices allow verifying if the factor analysis model is fine or not, and where it fails to reproduce correlations. The next table shows the eigenvalues resulting from the factor analysis. We can see that with 5 factors explains 82.4% of the data but if 7 factors are involved we keep 90.985% of the variability of the initial data can be explained but with 11 factors 100% of the data can be explained.

Eigenvalues:									
	F1	F2	F3	F4	F5	F6	F7	F8	
Eigenvalue	29.027	11.074	7.558	5.130	4.068	3.270	2.640	2.181	
Variability (%)	42.068	16.049	10.953	7.435	5.895	4.739	3.826	3.160	
Cumulative %	42.068	58.117	69.070	76.504	82.400	87.139	90.965	94.125	

Figure 16 : Various output for PCA: India

Since the results of the factor analysis which merits discussion. The high Cranach Alpha and Bartlett test mean that the key drivers are adequate for joint proxies to a single latent factor. They are unidimensional, and express no characteristic. The economic interpretation of this result is that our choice of key drivers is appropriate for our purpose to assess FDI as per 5 criteria including host country FDI policy, Business Facilitation, market seeking, Efficiency seeking FDI, Asset Seeking FDI and resource seeking as depicted in section 2.5 (the variables)

Appendix G: Malaysia Results

Model Significance Malaysia

Goodness of fit statistics (Variable FDI):	
Observations	11.000
Sum of weights	11.000
DF	6.000
R²	1.015
Std. deviation	132602021.344
MSE	10383684214589000.000
RMSE	101900364.153

Index	Comp1	Comp2	Comp3	Comp4
Q² cum	0.796	0.887	0.916	0.948
R²Y cum	0.879	0.960	0.984	0.985
R²X cum	0.368	0.598	0.655	0.716

PLS Model significance

Table below gives details on regression results. *R*-squared is generally used in explaining the variance in either FDI stock or inflows, which is accounted for by the explanatory variables. The values of the *R*-square of the model are 0.958, for the testing of Malaysian FDI, suggesting that the overall explanatory power of the model is very strong. Despite shortcomings owing to the short span of available data, this study does present an initial insight into Malaysian FDI determinants in terms of home-country macroeconomic variables.

Goodness of fit statistics (Variable FDI):

Observations	11.000
Sum of weights	11.000
DF	6.000
R2	1.000
Std. deviation	77216126.362
MSE	3252180092912640.000
RMSE	57027888.729

Model quality:

Index	Comp1	Comp2	Comp3	Comp4
Q2 cum	0.797	0.907	0.951	0.970
R2Y cum	0.880	0.967	0.999	1.000
R2X cum	0.368	0.596	0.651	0.714

Figure PLS output and graphs: Malaysia				

Table 13 – principle component analysis output

The Q² cumulated index measures the global goodness of fit and the predictive quality of the 97% models. XLSTAT-PLS has automatically selected 4 components. We see that Q² remains high with 4 components and is at 97 percent predictive quality. This suggests that the quality of the fit slightly and is perfect for interpretation. The cumulated R²Y and R²X cum that correspond to the correlations between the explanatory (X) and dependent (Y) variables with the components are very close to 1 with 1 component. This indicates that the 4 components generated by the Partial Least Squares regression summarize well both the Xs and the Ys 97% based on 4 factors (**XLSTAT, 2013**). The first correlations map allows visualizing on the first two components the correlations between the Xs and the components, and the Ys and the components. We can see that for some judges displayed at the centre of the map, the correlations are low. By looking at the corresponding table, we see that for example, the Energy use per capita judge is only correlated with the first component that is globally little correlated with the explanatory variables.

PCA model Significance

The first results that are displayed are the summary statistics of the selected variables, and the correlation matrix between the variables. We can see that some of the correlations are quite high (0.727 for MEII). The standardized Cronbach's alpha is computed for the whole input table. An alpha of 0.842 means that there is low redundancy among the variables and the overall data seems to be correlated and is a good estimation for FDI. The Bartleet's Test scores were shown below indicates p value of less than 0.0001 showing high model significance and depicts that the data is not an identity matrix but is not an identity matrix hence can be factorised.

Bartlett's test / Two-tailed test:	
Chi-square (Observed value)	0.000
Chi-square (Critical value)	0.000
DF	70
p-value (one-tailed)	< 0.0001

Alpha	0.05							
Eigenvalues:								
	F1	F2	F3	F4	F5	F6	F7	F8
Eigenvalue	29.559	10.491	7.214	5.346	4.251	3.300	2.531	1.919
Variability (%)	44.118	15.659	10.767	7.979	6.344	4.925	3.778	2.864
Cumulative %	44.118	59.777	70.544	78.523	84.868	89.793	93.571	96.435

Figure17 : Various output for PCA

The reproduced and residual correlation matrices allow verifying if the factor analysis model is fine or not, and where it fails to reproduce correlations. The next table shows the eigenvalues resulting from the factor analysis. We can see that with 1 factor explains 44.118% of the data but if 5 factors are involved we keep 84.8 % of the variability of the initial data can be explained but with 10 factors 100% of the data can be explained.

Since the results of the factor analysis which merits discussing. The high Cranach Alpha and Bartlett test mean that the key drivers are adequate for joint proxies to a

single latent factor. They are unidimensional, and express ne characteristic. The economic interpretation of this result is that our choice of key drivers is appropriate for our purpose to assess FDI as per 5 criteria including host country FDI policy, Business Facilitation, market seeking, Efficiency seeking FDI, Asset Seeking FDI and resource seeking as depicted in section 2.5 (the variables)

China Summarised PLS, PCA and variable selection

PLS Correlation and PCA contribution of the variables with							Variable

Variables	FDI	Rank	PCA % contribution	rank	Classification		Significance
ranking							
CCR	0.112	61	2.01	19			Medium
MEII	0.071	64	2.947	12			Medium
PS	0.503	36	5.839	2			high
ERS	0.25	51	1.169	25			low
SD	0.304	48	0.099	49	12.065		low
AFC	0.701	18	0.113	48			Low
RFCT	0.177	58	0.037	57	0.15		low
PSC	0.455	38	2.528	14			high
MA	0.639	26	1.12	26			high
Greenfield	0.625	29	0.21	43			low
CBV	0.318	47	3.987	10			high

FI	*0.477*	37	0.017	60			low
FFI	**0.752**	12	0.018	59	7.879		low
ACM	0.202	55	0.012	61			very low
FC	0	67	0.118	46			very low
IPS	*0.713*	17	0	67	0.13		low
PA	0	67	0.004	63			very low
CL	*0.53*	35	0	67	0.004		low
MTR	*0.724*	16	1.562	22			high
VTR	*0.645*	25	1.381	24			high
HIB	*0.688*	19	0.07	52			low
COI	*0.468*	45	0.045	56	3.058		low
BIT	*0.371*	43	2.447	15			very low
DTT	**0.028**	66	0.007	62			low
CTR	*0.453*	39	4.629	8	7.083	30.36873	high

ii	**0.046**	65	4.422	9			Medium
GS	0.199	56	0.052	54			low
CC	*0.659*	23	1.917	20	6.391		high
BC	**0.334**	46	1.905	21			Medium
AONB	*0.6*	31	0.223	42			low
GB	0.186	57	0.172	45			low
TRSB	*0.792*	9	2.056	18	4.356		high
QL	*0.632*	27	1.51	23	1.51	12.257	High
GDPgrowth	*0.747*	14	0.229	41			Medium
GDPpercapita	*0.618*	30	5.079	6			high
WFDIS	*0.579*	32	0.431	35	5.739		low
IIWRB	*0.867*	4	3.613	11			high
TE	*0.868*	3	0.348	37	3.961	9.7	medium
NR	*0.839*	5	0.353	36			medium

LR	**0.112**	60	2.655	13			medium
UCL	*0.667*	21	0.661	33	3.669	3.668614	medium
CB	0	67	0.939	29			very low
SL	0.212	54	0	67			very low
FHSKL	0	67	0.046	55			very low
its	*0.545*	34	0	67			Medium
sse	0.267	50	0.319	39			low
set	*0.801*	7	2.218	16	3.522		high
RD	0.098	63	1.09	27			medium
Patent	*0.653*	24	4.79	7			low
Patentforce	*0.631*	28	0.184	44			medium
Tech	*0.416*	42	0.558	34	6.622		high
roads	*0.872*	1	0.887	31			medium
railraods	*0.67*	20	0.912	30			Medium

QofAIR	*0.753*	11	0.117	47			low
water transportation	0.349	44	0.752	32			very low
DISB	*0.56*	33	0.002	64			Medium
Telephone	*0.793*	8	0.285	40			medium
mobile	*0.751*	13	5.511	5	8.465	18.609	High
OP	*0.759*	10	0.071	51			low
Energyusepercapita	**0.103**	62	0.021	58			Medium
GFCF	**0.151**	59	2.097	17	2.189		very low
fixedtelephone	*0.428*	40	0.063	53			Medium
electricacosts	*0.659*	22	0.985	28			low
Adequecyofcomm	0.284	49	0.001	66			low
Energyuse	0.222	53	0.002	65			Medium
COL	*0.736*	15	5.599	3			high

Apartment	*0.427*	41	5.567	4			High
Office	*0.818*	6	0.085	50			low
ImportsofICT	0.234	52	0.324	38			medium
exportsofservices	*0.869*	2	6.746	1	19.372	21.561	high
FDI	**1**		3.836		1.564		

* PLEASE NOTE THE CORRELATIONSTHAT ARE DEPICTED IN BOLD RED ARE NEGATIVE.

* Please NOTE THAT CONTRIBUTIUON OF VARIABLES TAKES IN TO ACCOUNT FDI CONTRIBUTION

Appendix 9- India summarised PLS,PCA and Variable Selection

PLS Correlation and PCA contribution of the variables with ranking			

Variables	FDI	Rank	PCA % contribution
CCR	0.349	41	0.007
MEII	0.890	1	4.609
PS	0.160	59	0.051
ERS	**0.631**	22	5.490
SD	**0.128**	62	2.605
AFC	0.702	19	4.025
RFCT	**0.438**	36	0.733
PSC	**0.341**	42	0.290
MA	**0.165**	57	0.077
Greenfield	0.111	64	1.209
CBV	0.283	49	3.618
FI	**0.308**	48	3.088
FFI	0.356	40	1.583

ACM	**0.235**	53	3.906
FC		#N/A	
IPS	0.792	10	0.000
PA	0.315	47	0.061
CL	0.315	46	1.596
MTR	**0.234**	54	1.596
VTR	**0.283**	50	0.000
HIB	0.772	13	0.001
COI	**0.470**	33	0.018
BIT	0.158	60	0.003
DTT	**0.232**	55	3.063
CTR	**0.577**	25	1.438
ii	0.498	30	1.102
GS	0.790	11	1.425

CC	**0.131**	61	0.465
BC	0.421	37	0.006
AONB	**0.244**	52	3.310
GB	0.278	51	1.494
TRSB	**0.552**	28	2.537
QL	0.672	20	2.855
GDPgrowth	**0.091**	66	2.537
GDPpercapita	0.645	21	1.503
WFDIS	0.824	6	0.000
IIWRB	0.833	4	0.034
TE	0.785	12	0.232
NR	0.824	7	0.192
LR	0.471	32	0.172
UCL	**0.802**	8	3.640

CB	0.562	26	0.214
SL	**0.719**	16	1.010
FHSKL	0.537	29	0.006
its	**0.835**	3	3.010
sse	0.162	58	0.364
set	0.374	39	0.001
RD	**0.084**	67	0.744
Patent	0.703	18	0.346
Patentforce	0.705	17	0.044
Tech	0.071	68	0.783
roads	**0.339**	43	0.288
railraods	0.580	24	0.002
QofAIR	0.556	27	0.652
watertransportation	0.397	38	2.467

DISB	0.455	35	4.406
Telephone	**0.335**	44	3.964
mobile	0.828	5	3.838
OP	0.755	14	0.614
Energyusepercapita	0.798	9	0.169
GFCF	0.114	63	0.496
Fixedtelephone	0.108	65	1.051
Electricacosts	0.615	23	4.817
Adequecyofcomm	0.322	45	0.000
Energyuse	0.208	56	3.888
COL	0.492	31	0.886
Apartment	**0.039**	69	0.105
Office	0.722	15	0.319
ImportsofICT	**0.461**	34	0.004

exportsofservices	0.878	2	2.538
FDI	**1.000**		0.715

Table 13: Combined results (PCA/PLS) India

* PLEASE NOTE THE CORRELATIONSTHAT ARE DEPICTED IN BOLD RED ARE NEGATIVE.

* PLEASE NOTE THAT CONTRIBUTIUON OF VARIABLES TAKES IN TO ACCOUNT FDI CONTRIBUTION

Appendix 10

LS/PCA results and variable selection

Variables	FDI	Rank	PCA	%	rank	Classification		significance

			contribution				
CCR	0.376	44	0.080	59			low
MEII	0.727	22	3.440	8			high
PS	0.050	66	0.958	34			low
ERS	0.582	33	1.524	24			high
SD	0.205	59	0.842	39	6.845		low
AFC	0.780	15	0.631	45			low
RFCT	0.319	50	3.814	7	4.445		medium
PSC	0.225	57	0.083	58			low
MA	0.634	30	2.387	16			high
Greenfield	0.668	28	0.913	35			medium
CBV	0.645	29	0.000	67			low
FI	0.492	37	1.925	19			high
FFI	0.743	20	4.657	3	9.966		high

ACM	0.749	17	1.099	30			medium
FC	0.892	2	3.126	11			high
IPS	0.736	21	0.902	36	5.127		medium
PA	0.614	31	0.079	60			low
CL	0.499	35	3.317	9	3.396		high
MTR	0.724	23	2.327	18			high
VTR	0.522	34	2.940	12			high
HIB	0.692	26	0.657	44			low
COI	0.398	41	0.813	40	6.738		medium
BIT	0.205	58	0.046	61			low
DTT	0.259	54	1.392	25			low
CTR	0.389	42	0.453	47	1.891	38.40754497	low
ii	0.259	53	4.166	5			medium
GS	0.241	56	0.279	50			low

CC	0.699	25	2.923	13	7.369		medium
BC	0.367	45	0.450	48			low
AONB	0.801	13	1.024	32			medium
GB	0.244	55	0.102	57			low
QL	0.836	10	1.203	27	4.691	12.060	medium
GDPgrowth	0.799	14	1.913	20			high
GDPpercapita	0.871	5	1.299	26			medium
WFDIS	0.851	8	2.905	14	6.116		high
IIWRB	0.892	3	1.192	28			medium
TE	0.892	3	1.192	28	2.384	8.500	medium
NR	0.303	51	0.177	54			low
LR	0.181	61	0.740	42			low
UCL		#N/A	0.000	68	0.917	0.916546089	low
CB	0.332	47	0.980	33			low

SL	0.144	64	2.444	15			medium
FHSKL	0.748	18	4.934	2			high
its	0.467	38	0.142	55			low
sse	0.321	49	0.257	52	9.546		low
set	0.179	62	0.789	41			low
RD	0.261	52	0.268	51			low
Patent	0.331	48	0.203	53			low
Patentforce	0.499	35	3.317	9			high
Tech	0.685	27	1.711	23	5.498		high
roads	0.377	43	0.116	56			low
railraods	0.612	32	0.484	46			low
QofAIR	0.088	65	0.007	64			low
water transportation	0.722	24	4.078	6			high

DISB	0.352	46	0.682	43			medium
Telephone	0.808	12	0.862	38			medium
mobile	0.839	9	0.902	37	7.940	22.984	medium
OP	0.900	1	2.364	17			high
Energyusepercapita	0.858	7	1.886	21			high
GFCF	0.006	67	0.319	49	4.569		low
fixedtelephone	0.868	6	1.873	22			high
electricacosts	0.810	11	4.461	4			high
Adequecyofcomm	0.756	16	4.979	1			high
COL	0.183	60	0.020	62			low
Apartment	0.169	63	0.002	65			low
Office	0.445	39	0.000	66			low
ImportsofICT	0.747	19	1.061	31			medium
exportsofservices	0.432	40	0.020	63	12.418	16.987	low

* PLEASE NOTE THE CORRELATIONSTHAT ARE DEPICTED IN BOLD RED ARE NEGATIVE.			
* Please NOTE THAT CONTRIBUTIUON OF VARIABLES TAKES IN TO ACCOUNT FDI CONTRIBUTION			

Appendix 12

PLS Correlation and PCA contribution of the variables with ranking			

Variables	FDI	Rank	PCA % contribution
CCR	0.082	65	2.388
MEII	0.854	9	0.404
PS	0.185	53	1.287
ERS	0.762	20	2.965
SD	0.139	60	3.557
AFC	0.675	22	0.781
RFCT	0.534	29	3.234
PSC	0.172	55	5.635
MA	0.634	23	1.245
Greenfield	0.165	57	0.453
CBV	0.251	46	3.721
FI	0.227	48	5.074
FFI	0.310	42	3.733

ACM	0.133	61	0.604
FC	0.060	67	2.041
IPS	0.904	3	0.005
PA	0.762	21	0.480
CL	0.776	18	0.075
MTR	0.363	38	0.211
VTR	0.378	37	0.816
HIB	0.809	15	0.288
COI	0.825	13	0.013
BIT	0.286	43	1.600
DTT	0.183	54	3.084
CTR	0.410	34	2.289
Ii	0.544	28	2.307
GS	0.812	14	0.009

CC	0.399	36	0.223
BC	0.091	64	4.941
AONB	0.865	8	0.010
GB	0.257	45	4.161
QL	0.329	41	2.985
GDPgrowth	0.408	35	1.817
GDPpercapita	0.866	7	0.098
WFDIS	0.145	59	1.889
TE	0.796	16	0.031
NR	0.509	30	0.794
LR	0.042	68	3.748
UCL	0.243	47	1.596
CB	0.619	24	1.646
SL	0.170	56	2.945

FHSKL	0.197	52	4.008
lts	0.435	33	3.562
Sse	0.587	25	0.058
Set	0.841	11	0.288
RD	0.569	27	0.658
Patent	0.961	1	0.052
Patentforce	0.776	18	0.075
Tech	0.871	6	0.037
Roads	0.586	26	0.592
Railroads	0.163	58	0.306
QofAIR	0.497	31	0.002
watertransportation	0.129	62	2.941
DISB	0.360	39	2.531
Telephone	0.273	44	0.543

Mobile	0.475	32	0.009
OP	0.885	5	0.067
Energyusepercapita	0.068	66	0.194
GFCF	0.123	63	0.728
Fixedtelephone	0.226	49	3.557
Electricacosts	0.828	12	0.004
Adequecyofcomm	0.345	40	2.889
Energyuse	0.851	10	0.136
COL	0.200	51	0.798
Apartment	0.217	50	0.001
Office	0.889	4	0.029
ImportsofICT	0.946	2	0.203
exportsofservices	0.793	17	0.189

* PLEASE NOTE THE CORRELATIONSTHAT ARE DEPICTED IN BOLD RED ARE

NEGATIVE.

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Appendix H: Other Graphical representations of data: correlation maps, regression lines and other representation

Correlation maps

China   India

Indonesia   Malaysia

Regression lines

China
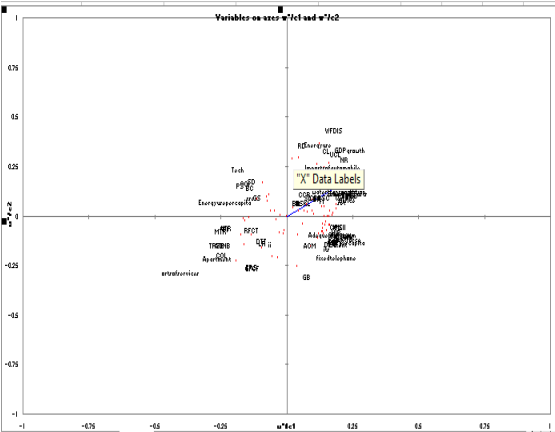
India
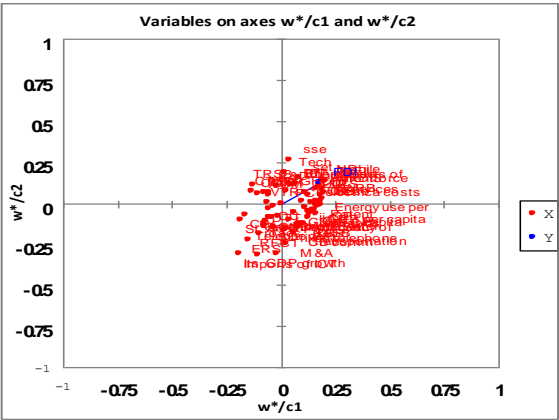
Indonesia
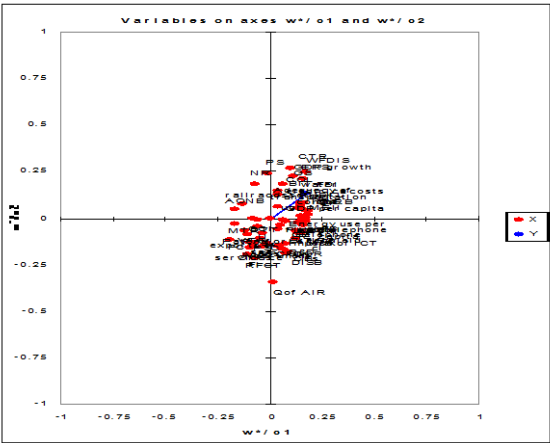
Malaysia
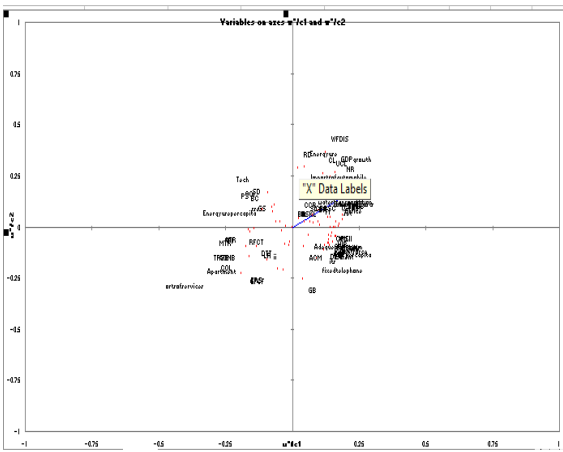
Appendix I: Definitions list and expected relationships

Variables	Definition
CCR	**CCR is derived fr om "**The *International Country Risk Guide* (*ICRG*) rating which comprises 22 variables in three subcategories of risk: political, financial, and economic. A separate index is created for each of the subcategories. The composite scores, ranging from zero to 100, are then broken into categories from Very Low Risk (80 to 100 points) to Very High Risk (zero to 49.9 points)" ((THE PRS GROUP, 2013)) and can have **positive, negative or no significance**. relationship similar to the above findings, where he states that the country has to improve its country risk profile accompanied by cost factors and other common Macro-economic variables, he goes on to state about this "The country requires maintaining the stable macroeconomic stability and continuity in reform process of last 17 years of openness policies. This implies continuity of sustained stable macroeconomic policies, improvement in country's risk profile followed by cost related and investment environment improving factors. The long run scenario is also linked with level of employment of skilled labor, the process of capital formation and the quality of human capital country produce. Certainly, the fiscal, monetary, investment, social policies are directed towards achieve these goals. Further, the country can indeed realize benefits from present attributes in keeping a FDI friendly atmosphere". Therefore as per the research the better the **CCR score the larger the FDI flows** in which a **positive relationship is generally expected** (Ahmed Nawaz Hakaro, 2011)
MEII	**MEII is derived from the Global Competitiveness report "**The macroeconomic environment index indicates the quality of the macroeconomic environment of a country" Can have **a positive, negative or no significance**. "The term "Macroeconomic Stability" describes a national economy that has minimized vulnerability to external shocks, which in turn increases its prospects for sustained growth. The hard-data indicators for macroeconomic stability include statistics for government deficits, national savings rates, inflation, real exchange rates and interest rate spreads. These are supplemented by survey questions about the likelihood of a recession and the availability of credits" ((Christiansen, 2004)). Is taken from the ICRG and consists of Voice and accountability, Political stability, government effectiveness, rule of law and regulatory quality. Findings in relation to this variable is seen in the ADB Working Paper Series on Regional Integration suggests that Macro Economic Environment index is a good measure against that of FDI. Furthermore "Macroeconomic stability is important to the overall business environment and competitiveness of an economy. Although stability alone cannot increase the productivity of a nation, it is recognized that macroeconomic disarray harms economic efficiency and productivity. Firms cannot make informed decisions when inflation is out of control and governments cannot provide services efficiently if they have to make high-interest". Generally a positive relationship is expected with FDI.

PS	PS has a significant positive impact indicating that if the risk political stability index increases which means that FDI should increase proportionately. Political stability has been measured via the measure "the risk of political stability" variable updated by IMD which has defined it as "Risk of political instability indicates the level of threat that social protests have towards its own government. The index ranges from 1 to 10 where a higher value indicating that the risk of political instability in that specific country is very low. Almost no research can be found on the direct effect of political instability on competition law. Therefore a more intuitive approach will be followed, in order to determine the a priori sign of the risk of political instability coefficient. The level of political stability influences deeply the economic environment. A more politically stable government is thought to have less "social" issues and therefore it can focus more on the economic environment. If a government is politically unstable also the institutions that surround the government, such as the antitrust offices are expected to be inefficient. A more stable government takes care of investment protection, simple tax and bureaucratic procedures; in other words, political stability increases the ease of doing business" (Sinderen, 2011).**Therefore the more stable the government or when the PS index increases the expectation is that it will promote FDI.**
ERS	"Exchange rates express the value of one country's currency in relation to the value of another country's currency. The rates play an important part in economics, affecting the balance of trade between nations and influencing investment strategies" (https://www.cato.org/pubs/journal/cj8n2/cj8n2-3.pdf) ERS can have a positive, negative or no impact at all. Goldberg and Klein (1997) indicate "that exchange-rate movements are an important determinant of both trade and FDI flows between Japan and several Southeast Asian countries. For instance, a real appreciation of the Japanese yen against the US dollar tends to induce Japanese FDI flows into these countries, thereby contributing to the development of local export capacity, which supports the earlier findings of Kawai and Urata (1995)" ((Cooperation, 2002)).
SD	Sustainable development has no impact to FDI flows and will be omitted from the findings from certain country results. Sustainable development is defined " as development that can continue "forever" or at least for a very long time; say, for several generations. Given the discussion above, this statement can be put more fundamentally: sustainable development is increasing well-being over a very long time. Yet more fundamentally: sustainable development is increasing consumption, following its broadest economic interpretation, over a very long time". (Group, 2008)**. The expected relationship is that on the long run it improves FDI performance for a country.**
AFC	**AFC was known to have a positive significance on FDI. AFC was measured via protectionism. "**The theory or practice of shielding a country's domestic industries from foreign competition by taxing imports". . AFC was measured through the level of protectionism and the findings were similar to those of Boden et.al suggest that "One argument holds that trade protection may increase FDI, in particular horizontal FDI. Multinational firms may aim to enter markets that are protected by high trade barriers by setting up affiliates in

	the protectionist country, thus increasing FDI flows. By contrast, another argument holds that trade protection may in fact deter FDI, in particular vertical FDI. For one, multinational firms might find it less attractive to offshore affiliates that are part of the value chain if the import and export of intermediate and final goods is inhibited by trade protection measures. He further goes on to state that More generally, trade protection may evoke distrust in possible foreign investors regarding future trade openness or other economic or institutional characteristics of a certain protectionist country". **However the expected sign is positive implying that trade protectionism will promote FDI** ((Holger Görg, 2013).
RFCT	RFCT is defined by the level Banking and Finance regulations posed on the foreign investor, the findings in this study is similar to that of Cheng et.al who suggests for a panel study conducted in Africa he finds "negative correlation between the cost of regulation and FDI growth rate is self-evident, considering the economic environment for trade and investment in the five countries" finds negative growth" ((GEORGE MESSINIS ABDULLAHI D. AHMED, 2007)). **This suggests that the expected outcome is an increase in banking and regulation(RFCT) will discourage promotion FDI**.
PSC	**PSC "**Contracts other than public works or supply contracts having as their object the provision of services referred to the public good. A public contract having as its object both products and services within the meaning for creating the public good shall be considered to be a 'public service contract' if the value of the services in question exceeds that of the products covered by the contract". PSC can have mixed results in for FDI based on the governments conditions related to the contract and hence may affect crucial FDI sectors. ((Europa, 2004)) . Therefore based on government policy can result in positive, negative or no significance effects on FDI
MA	**M&A** is defined as "The purchase of the controlling interest or ownership of another company. This can be affected be Agreement with the persons having majority of the stake, Purchase of shares in the open market, To make takeover offer to the general body of share holders, Purchased of new shares by private treaty and Acquisition of share capital while a Merger is the fusion of two or more companies (OR) Merger is a combination of two or more companies into a single company where, it survives and others loose the corporate identity. The survivor acquires the assets and liabilities of the rest". Mergers and Acquisition are based on the number done in a given year, the effect to FDI is based on the incentives provided by the host country (Karvy, 2013) generally the expected sign is a positive movement.
Greenfield	While **Greenfield investment** "A type of foreign investment in which a parent company will begin a new venture in another, usually developing, country. This parent company will construct new facilities as well as create new jobs when they hire new employees for these facilities. These companies are typically offered tax breaks and other incentives for setting up green field investments" (Investorwords Glossary, 2013). Greenfield investments are also determined by the number and again its effect on FDI is based on the conditions of the host country policy environment for FDI. Generally the expected sign is a positive movement.

CBV	"A joint venture is a contractual agreement between two or more parties for the purpose of executing a business undertaking in which the parties agree to share in the profits and losses of the enterprise as well as the capital formation and contribution of operating inputs or costs. It is similar to a *partnership*, but typically differs in that there is generally no intention of a continuing relationship beyond the original purpose. A joint venture may not involve the creation of a new legal entity"**(AKW.apaweb.ord**). **CBV create a significant positive impact and is measured in the index by the value of cross border venture deals** ((USLEGAL, unknown)). The finding related to CBV can be explained by Madhavan et.al that finds a **positive correlation between FDI and CBV** and hypothesize that "transnational technical communities accelerate cross-border venture-related activities, especially when they possess an entrepreneurship orientation. A regression analysis of factors determining cross-border venture capital investments" provides evidence supportive of our argument where **positive correlations were found. The expected outcome is that Cross border ventures will encourage FDI in an environment which has experience and entrepreneurship orientation.**
FI	**Foreign investors** are defined as from the "objective of establishing a lasting interest in an enterprise resident in an economy other than that of the investor (direct investment enterprise). "Lasting interest" implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence by the direct investor on the management of the direct investment enterprise". **The higher the level of foreign investors the greater the level of FDI as per the literature**. Utilization of Foreign Capital in a new or existing economic enterprise after obtaining the Investment License (OECD, OECD benchmark definition of FDI, 2000
FFI	**Foreign Financial institutions** The definition of "affected foreign financial institutions (FFIs) is broad and wide-ranging, and includes entities that manage investments, including alternative investment entities and insurance companies". **The higher the number of institutions it positively effects FDI.** ((KPMG, 2013))
ACM	Access to capital markets " financial market that works as conduit for demand and supply of debt and equity capital. It channels the money provided by savers and depository institutions (banks, credit unions, insurance companies, etc.) to borrowers and investees through a variety of financial instruments (bonds, notes, shares) called securities. A capital market is not a compact unit, but a highly decentralized system made up of three major parts: (1) stock market, (2) bond market, and (3) money market. It also works as an exchange for trading existing claims on capital in the form of shares". **The higher the degree to which the foreign investors have access is the access to capital markets should increase the degree of FDI** ((dictionary b. , 2013)) **Wilhelms et.al suggest that "providing credit is one of the most important functions of financial intermediation. A financial system that supplies credit is expected to positively influence the FDI equation, because an increase in available capital induces business activity. Thus, the sign of the coefficient is expected to be positive"** (reference).

	However this variable is more aligned to interest rate rather than FDI. Therefore the expected sign is that ACM encourages FDI.
FC	**Foreign Companies** "a corporation which is incorporated under the laws of a different state or nation. A "foreign" corporation must file a notice of doing business in any state in which it does substantial regular business. It must name an "agent for acceptance of service" in that state, or the Secretary of State in some jurisdictions will automatically be that agent so people doing business with a foreign corporation will be able brings legal actions locally if necessary". Foreign companies have a significant positive impact on FDI ((dictionary f. l., 2013)) **Brealey and Kaplanis find a positive correlation between FDI and foreign banks, market size, exchange rates, access to capital markets between home and host countries is positively significant in China, however it is not clear about the influences of FDI on Foreign bank investment.**
IPS	"Investment protection scheme Investment protection is a broad economic term referring to any form of guarantee or insurance that investments made will not be lost, this may be through fraud or otherwise. For example, the Investment Protection Bureau is a New York State legal body which is charged, according to the New York State Securities Law (the Martin Act), to protect the public from fraud by monitoring and limiting investment. Most other protection is of this form, monitoring brokers and comparable individuals, and legally preventing them from misusing investment". **In Pangarkar and Lim's (2003) study, a five item additive measure** "(1. government restraints on cross-border ventures; 2. availability of investment protection scheme to foreign companies; 3. non-discriminatory policies towards foreign investors in terms of investment incentives; 4. state interference for the development of business; and 5. the extent of government influence on investment") **was used and FDI found to have a positive relationship in terms of IPS.** ((words, 2013)). **A study conducted by Kawai suggest that IPS is part of favorable government policy and in a study conducted by Emanuel found positive significance in terms of Investor protection both in terms of concessions and holidays. Therefore the expected outcome is that if Investor protection Schemes increase it would promote FDI. (** (Cleeve, 2004)**)**
PA	**Patent and copy right protection, "**Copyright is a form of protection provided to the authors of "original works of authorship" including literary, dramatic, musical, artistic, and certain other intellectual works, both published and unpublished" (refrence) while a patent is "A patent for an invention is the grant of a property right to the inventor, issued by the Patent and Trademark Office. The term of a new patent is 20 years from the date on which the application for the patent was filed in the United States or, in special cases, from the date an earlier related application was filed, subject to the payment of maintenance fees. US patent grants are effective only within the US, US territories, and US possessions" A recent article finds a positive and significant effect of FDI on the number of patent applications. "Using data from 1995 to 2000, Cheung and Lim (2004) find that provinces with more FDI have more

	domestic patent applications suggesting a positive correlation. The strongest effects are found a minor category of patents, that of design patents. . They attribute this to a form of spillovers from foreign investment, namely, a demonstration effect on domestic enterprises the difficulty with using patent applications filed rather than granted rests with filing as not being necessarily consistent with innovation. When we examine patents that have been granted, then the criteria for patents that usually include original and non-obvious innovation are more likely to have been met. A province which received substantial FDI could generate incentives to file patents, but does not necessarily capture innovation seen more readily through the amount of patents that are granted to a domestic firm rather than by applications" (Linda, 2006). **Therefore the expected outcome is that increased patent applications have a positive effect on FDI.**
CL	**Competition legislation "**Competition law, known in the United States as antitrust law, are laws that promote or maintain market competition by regulating anti-competitive conduct"(reference). Studies showed that FDI can provide development and legislative changes that can positively enhance the economic conditions of the host countries. The expected outcome is that Positive completion legislation policies will increase FDI growth. (Murad, 2005). Kalil et.al explores this relationship he considers the "correlation between foreign direct investment inflows over the period 1992-97 and the level of institutional development of the competition institutions in a sample of 66 countries one could argue that developing countries should not prioritize competition policy because it would discourage foreign direct investment by creating additional regulatory barriers and risks for the investor. The argument is analogous to the notion sometimes implicitly suggested that developing countries could accept lower environmental standards to avoid deterring potential investments. On the other hand, it could be argued that competition policy attracts foreign investment because it provides a level playing field for fair competition among firms and a sound institutional environment. A more appropriate way to examine the relationship between the institutional development of the competition institutions (i.e competition legislation) and foreign direct investment inflow is the Spearman correlation of the rankings by the two variables. The Spearman correlation indicates that there is a small, significant and positive correlation between the two variables is positive and significant at a 95% confidence interval when foreign direct investment *per capita* is used, **and positive and significant at a 90% Confidence interval when foreign direct investment per gross domestic product is used" (reference is bellow). Thus the expected effect is that competition legislation promotes FDI. (** (Gesner de Oliveira, Competition Policy and Foreign Direct Investment: POSSIBLE RELATIONSHIPS AND ASPECTS FROM THE RECENT BRAZILIAN EXPERIENCE, 2000)**)**

MTR	"Simple mean applied tariff is the unweighted average of effectively applied rates for all products subject to tariffs calculated for all traded goods. Data are classified using the Harmonized System of trade at the six- or eight-digit level. Tariff line data were matched to Standard International Trade Classification (SITC) revision 3 codes to define commodity groups. Effectively applied tariff rates at the six- and eight-digit product level are averaged for products in each commodity group. When the effectively applied rate is unavailable, the most favoured nation rate is used instead. To the extent possible, specific rates have been converted to their ad valorem equivalent rates and have been included in the calculation of simple mean tariffs". **Fahath et.al where MTR were to have negative effect on FDI** (Bank, 2013)
VTR	**Variability in tariff rates "**Simple mean most favoured nation tariff rate is the unweighted average of most favoured nation rates for all products subject to tariffs calculated for all traded goods. Data are classified using the Harmonized System of trade at the six- or eight-digit level. Tariff line data were matched to Standard International Trade Classification (SITC) revision 3 codes to define commodity groups". **Fahath et.al where VTR were to have negative effect on FDI.**(Bank, 2013)
HIB	Hidden Import Barriers are the customs duty intended to make imports more difficult Example to impose tariff barriers on or to lift tariff barriers from a product. Cost of importing is measured via "Customs and other import duties are all levies collected on goods that are entering the country or services delivered by non-residents to residents. They include levies imposed for revenue or protection purposes and determined on a specific or ad valorem basis as long as they are restricted to imported goods or services. Yanika finds positive correlation. HIB has a positive and negative effects as found by Yanikka who found mainly positive correlations and significant effect on growth. Therefore the expected outcome is when importing barriers and cost of importing is less is less that promotes FDI. ((Raghavan, 2003) (Investorwords Glossary, 2013))
COI	The cost of importing a product in the market, measured by the IMD variable COI. The expected relationship is the higher the cost of importing the . Yanika finds positive correlation.
BIT & DTT	**Bilateral trade treaties are defined as "**The exchange of goods between two countries. Bilateral trade agreements give preference to certain countries in commercial relationships, facilitating trade and investment between the home country and the foreign country by reducing or eliminating tariffs, import quotas, export restraints and other trade barriers. Bilateral trade agreements can also help minimize trade deficit" (Investorwords Glossary, 2013). While DTT is "Reciprocal arrangement between two countries not to retax the repatriated income that a firm or person domiciled in one country earned in (and paid taxes on) the other" (Karvy, 2013) **To explain the impact of**

bilateral tax treaties on foreign direct investment using data from OECD countries over the period 1982-1992 blonigen et.al has conducted a study. He found **"that recent treaty formation does not promote new investment, contrary to the common expectation. For certain specifications we find that treaty formation may actually reduce investment as predicted by arguments suggesting treaties are intended to reduce tax evasion rather than promote foreign investment". However in an environment promoting taxation such as Thailand can be explained. However in most cases in other studies conducted it was found to be insignificant. Therefore the expected outcome can be all three outcomes and is based on the investment environment, however most studies lead to negative significance** (Davies, 1993)

CTR are "Taxes paid by corporations can be measured in a number of ways, including the marginal corporate tax rate and <u>the total taxes paid as a percentage of profits</u>. The **highest marginal corporate tax rate** is simply the highest tax rate shown on a country's schedule of corporate taxes. The World Bank defines it more specifically as the highest rate shown on the schedule of tax rates applied to the taxable income of corporations". **park et.al "who finds positive or negative significance based on the role of the pro Foreign direct investment (FDI) environment offered in Singapore's remarkable economic success. Rapid growth of FDI is an integral element of economic globalization and governments around the world are competing vigorously with each other to attract FDI by offering fiscal incentives to foreign investors. In his paper, he finds the relationship between FDI and corporate taxation from the Singaporean perspective. His main conclusion is that corporate taxation is definitely an important component of a package of factors that have made Singapore an attractive FDI destination. Furthermore, Singapore's experience shows that lower corporate taxes will have a much greater impact on promoting FDI inflows if they are pursued with other pro-FDI policies rather than in isolation."** (Park, 2012) Therefore raising CTR will discourage FDI to a certain location. **This study was found to be significant in a study conducted by park et.al who finds positive or negative significance based on the role of the pro foreign direct investment (FDI) environment offered in Singapore's remarkable economic success. Rapid growth of FDI is an integral element of economic globalization and governments around the world are competing vigorously with each other to attract FDI by offering fiscal incentives to foreign investors. In his paper, he finds the relationship between FDI and corporate taxation from the Singaporean perspective. His main conclusion is that corporate taxation is definitely an important component of a package of factors that have made Singapore an attractive FDI destination. Furthermore, Singapore's experience shows that lower corporate taxes will have a much greater impact on promoting FDI inflows if they are pursued with other pro-FDI policies rather than in isolation".** (Park, 2012)

ii	**Investment incentives are defined as "**Government schemes aimed at stimulating private sector interest in specified types of capital expenditure, or investment in areas of high unemployment or backwardness. These incentives may take the form of direct subsidies (investment grants) or corporate income tax credits (investment credit) that compensates the investors for their capital costs" (dictionary b. , 2013)**It was found by Dinga et.al his paper examines the role of an investment incentives scheme in foreign direct investment (FDI) attraction. The territorial distribution of FDI in the Czech Republic during 2001-2006 is analyzed on a panel of district-level data. The identification strategy is based on a regression-discontinuity approach as the scheme design introduces three unemployment thresholds differentiating the amount of the subsidy. The results indicate a positive effect and both economically and statistically significant effect for the threshold" of 90% confidence interval (Dinga, 2008). However the negative significance can be explained by Zhang, et.al suggests the following for "China's FDI policy; we could know that there should be a substitute relationship between the incentives and the investment climates. While offering incentives are short-time policy and building a good investment climates is a long-run task. From our analysis, the incentives to foreign investors show more and more negative effect on the economy. But it is no doubt that the incentives, ie. Tax incentives have played an important role in attracting FDI in the beginning of utilization of FDI". Therefore again the investment environment can promote FDI both positively and negatively** (Dinga, 2011) (lIPING ZHANG, 2003)
GS	**GS are defined as "**Subsidies, grants, and other social benefits include all unrequited, no repayable transfers on current account to private and public enterprises; grants to foreign governments, international organizations, and other government units; and social security, social assistance benefits, and employer social benefits in cash and in kind" ((Bank, 2013)). **. as per a "study conducted by the conference board of Canada, Government subsidies to foreign investors can increase the total amount of inward FDI, but can also reduce any spillover benefits from these investme0nts"** (canada, 2012)**). In studies conducted by Sun Tang found a positive significance and suggest that in order attract FDI for economic development and industrialization, China pursued policies such as offering subsidies, incentives, protection and guarantees potential investors. Consequently Chinese FDI doubled between 1986-1989. Therefore the expected outcome is that government subsidies promote FDI (** (Sumei Tang, 2008)**.**
CC	**Control of corruption is defined as "**Corruption is often defined as *the misuse of entrusted authority for private gain*. It occurs any time that public officials or employees misuse the trust placed in them as public servants for either monetary or non-monetary gain that accrues to them, their friends, their

	relatives or their personal or political interests" (bank, 2013|). **The findings are similar to results undertaken by Wei's (2000) study on the effects of corruption on international investors' decisions. Using a cross-section of bilateral FDI stocks, from 12 source countries to 45 host countries, he found a significant negative eject of corruption on FDI investment while control was positively related (Zhou, 2007).**
BC	**BC is defined as** "*the misuse of entrusted authority for private gain*. It occurs any time that public officials or employees misuse the trust placed in them as public servants for either monetary or non-monetary gain that accrues to them, their friends, their relatives or their personal or political interests" (Bank, 2013). The findings are similar to results undertaken by "Wei's (2000a) study on the effects of corruption on international investors' decisions. Using a cross-section of bilateral FDI stocks, from 12 source countries to 45 host countries, he found a significant negative eject of corruption on FDI investment" (Zhou, 2007). **Therefore the expected effect that with increased BC will result discouraged FDI**
EODB	**EODB is defined as "**The **ease of doing business index** is an index created by the World Bank. Higher rankings indicate better, usually simpler, regulations for businesses and stronger protections of property rights. Empirical funded by the World Bank to justify their work show that the effect of improving these regulations on economic growth is strong positive **correlation" is best explained by Kwok Yi Lam on his study institutions and development using pooled regression data from found to positively significance, however though the determinant is the same the data he received was from the Frazier Institute results. While Zhang in his OLS regression finds negative correlations in terms of the EODB. The expected outcomes is with Higher Ease of Doing Business will encourage FDI** (Haozhen Zhang, 2007)**.**
GB	**Government Bureaucracy is defined as "**a system of government in which most of the important decisions are taken by state officials rather than by elected representatives" ((dictionary b. , 2013)). **Studies are similar to that of Beatrice et.al "there is no significance correlation between the level of corruption and the allocation of foreign aid, regardless of the time period under consideration". However though the study states that negative correlation exists in his OLS regression his results are similar to that of this report. Therefore the expected outcome is that when Corruption increases it will reduce FDI. The positive association is shows in Busse and Hefeker (2007) "**Using different econometric techniques for a data sample of 83 developing countries and the period 1984 to 2003" **who find a significant positive association while the negative association can be best described by the panel data study done by Duanmu 2008 finds a negative relationship. The expected outcome is that with increased government bureaucracy will discourage FDI.**

TRSB	**TRSB is defined as "**Time required to start a business is the number of calendar days needed to complete the procedures to legally operate a business. If a procedure can be speeded up at additional cost, the fastest procedure, independent of cost, is chosen". (Bank, 2013)**. Based on Abdul matleb study based on panel data of 60 low income and middle income countries including china found negative but was insignificance was low compared to other variables. Other findings such as the European Commission find no significance. Julio et.al data reduction techniques finds positive and significant relationship between TRSB. His explanation stems that unitary value increase would result in that the Portuguese Government should take note as it is a an area as well under the Economic Freedom Index. However no specific Chinese studies were found in this regard. The author of the report in this finding ascertains that longer the time required to start a business for foreign companies would result in lost opportunity FDI income gains from the days lost and may also deter TNC investors away from FDI the longer the procedures take. Therefore the expected outcome is that when TRSB increases it will discourage FDI** (Paulo Júlio, 2011)
QL	**Quality of life is defined as** the term *quality of life* (**QOL**) references the "general **well-being** of individuals and societies. The term is used in a wide range of contexts, including the fields of international development, healthcare, and politics. Quality of life should not be confused with the concept of standard of living, which is based primarily on income. Instead, standard indicators of the quality of life include not only wealth and employment, but also the built environment, physical and mental health, education, recreation and leisure time, and social belonging as per Gregory, Derek; Johnston, Ron; Pratt, Geraldine et al., eds. (June 2009"). **The positive association is shown in the study conducted by Wang et.al who found a positive correlation between FDI and QL which he measured through the quality of air; however QL index by IMD is a more comprehensive predictor of Quality of life.** The impact of QL on FDI is a factor that has not previously been studied and hence only a hand few studies showed positive correlation but no studies found a negative correlation. "Since the inflow of foreign capital is almost always accompanied by the movement of foreign personnel to the new locality, it is natural that these investors would pick a location in which the quality of living is better, ceteris paribus", to improve on-the-job consumption and to reduce payment for hardship allowance (Wang et.al, 2011**). Therefore the Expected outcome is that when QL increases for a country it will promote FDI.**
GDPgrowth	**GDP growth is defined as** The annual percentage rate of change in the Gross National Product. **per Nunerkamp et.al 2002, "**among more traditional FDI determinants, market-related factors clearly stand out. In a frequently quoted survey of the earlier literature on FDI determinants, Agarwal (1980) found the size of host country markets to be the most popular explanation of a country's propensity to attract FDI, especially when FDI flows to developing countries are considered. Subsequent empirical studies corroborated this finding". The

	positive correlation in is stated by Nunerkamp et.al who states "Even authors who dismissed earlier studies as seriously flawed came up with results supporting the relevance of market-related variables such as GDP, population, GDP per capita and GDP growth; examples are: Schneider and Frey (1985), Wheeler and Moody (1992), Tsai (1994), Jackson and Markowski (1995) and, more recently, Taylor (2000), Chakrabarti (2001)". (Nations, transnational Corporation, 2002) **Therefore the expected outcome is that GDP growth will increase FDI positively**
GDPpercapita	The Total amount of good and services produced within the domestic economy divided by its population gives GDP per capita. **Again the same relationship depicted by GDP growth is expected where an increase in per capita GDP will increase FDI proportionally.**
WFDIS	**Share of World FDI stock is the individual countries contribution in terms of percentage to the global FDI stock.** The sign on the FDI stock variable is positive and significant at the one percent level just like the findings of Sethi et al (2003). These findings imply that countries currently receiving high levels of FDI will be more likely to attract future FDI than countries currently receiving low levels of FDI. Furthermore in his article he suggest that WFDIS is hard to interpret and furthermore no articles were found from the 125 articles read about WFDIS is interpreted **to have a positive relationship. Therefore the expected outcome is higher WFDIS positively affect FDI**.
IIWRB	IIWRB or openness is "refers to the degrees to which countries or economies permit or have trade with other countries or economies. The trading activities include import and export, foreign direct investment (FDI), borrowing and lending, and repatriation of funds abroad. Open economies generally greater market opportunities, at the same time they also face greater competition from businesses based in other countries. . Numerous empirical studies suggest that trade (imports and exports) complements rather than substitutes for FDI. Multinational enterprises (MNEs) tend to invest in the trade partner markets with which they are familiar. Much of FDI is export oriented and may also require the import of complementary, intermediate and capital goods. In either case, volume of trade is enhanced and thus trade openness is generally expected to be a positive and significant determinant of FDI" (Lankes and Venables, 1996; Holland and Pain, 1998; Asiedu, 2002; Sahoo, 2006).) To describe the negative relationship is best described by RoyFaizal et.al of trade openness and foreign direct investment in influencing economic growth in Malaysia during 1975-2005, using the Bounds testing approach suggested where he found that foreign direct investment is positively associated in the short run and negatively associated in the long run, both significantly. The expected outcome is that IIWRB will encourage FDI in the short run and Discourage in the long run.
TE	TE is the total exports of the country measured in real terms. **Hake, m. Et.al** **"**exports and the outward FDI stock using a panel of industries and seven EU countries for the period 1973-2004" and found positive significance in 1738 observations (Falk, 2008).The negative significance can only be explained through pedorini panel cointegration using panel data from Pham et.al, using panel data 1990-2007 he finds a negative significance for FDI. The expected outcome is that higher cumulative exports will increase FDI positively (Thi

	Hong Hanh PHAM, 2008).
NR	**Natural resources are defined as "**naturally occurring materials such as coal, fertile land, etc., that can be used by man for the production process". **NR as per studies conducted by "**Sowkut et al (2008) studied the FDI flows in Africa and found that the abundance of natural resources is reported to be positive and significant (supporting the presence of resource-seeking FDI) and is in line with studies done by Pradhan and saha, (2007), Aseidu (2008) and many others, while the negative association was tested using GMM and Panel data and Kinoshita et.al 2002 he finds a negatve significance relationship between the variables. "Natural resources are a key determinant of FDI. Foreign countries are naturally attracted to countries with an abundance of relevant natural resources. Natural resources allow a country to produce a certain good, cheaper then another country that does not have the luxury of having those natural resources. If a country has a natural resource that a foreign investor needs for their product, they will look to invest into that country. Countries with abundant natural resources will allow firms to produce their products at lower cost and hence higher profit all other things being equal. The more resources you have the more likely you are to attract FDI; however, it does depend on what the investor is looking for. (). The more natural resources a country have a positive significance on FDI but these dependents on the level of abundance in the country.
LR	**Labour regulations are defined as** The purpose of the internal labor regulations is to promote stronger socialist labor discipline, more effective use of working time, and a rise in labor productivity and efficiency of social production. Model regulations were ratified by the State Committee on Labor and Wages of the Council of Ministers of the USSR on Sept. 29, 1972 (the Committee *Bulletin'*, 1972, no. 12), with the consent of the All-Union Central Council of Trade Unions. Based on these model regulations, ministries and departments, with the consent of the appropriate central or republic committees of the trade unions, issue branch regulations, which take into account the individual features of each economic sector. The management of enterprises, establishments, and organizations, with the consent of the factory trade union committees, establish the internal labor regulations applicable to the operating conditions of the particular enterprise. In addition to general principles, the internal labor regulations contain sections dealing with methods of hiring and dismissing factory and office workers, basic duties of factory and office workers, basic duties of management, working hours and organization of the workday, job incentives, and punishment for violation of labor discipline. In terms of LR, "Brown (2000) points out that since labour standards are only one of several determinants of FDI, entering them as a dependent variable without properly controlling for other key variables can lead to biased estimates" and hence can lead to negative or no significance. Most estimates have weak regressions but find a positive significance between LR and FDI in the study by Sarna et.al 2005 who conducts a regression analysis and finds this association but saw it as a very weak determinant. **The expected outcome is that LR discourages FDI.**

UCL	"Unit labour costs (ULC) measure the average cost of labour per unit of output and are calculated as the ratio of total labour costs to real output". **measured** studies frequently use average wage rate and unit labor costs as measures of labor costs studies (Bellak et al. (2007), Fung et al. (2002), Cheng and Kwan (2000), Lucas (1993), Culem (1988), Schneider and Frey (1985), Flamm (1984)) conform to the mainstream literature that higher wages discourage FDI inflows, some studies found wages to be insignificantly and even positively related to FDI inflows (Owen (1982), Gupta (1983), Wheeler and Mody (1992). (OECD, 2013). **Therefore the expected outcome is that higher UCL discourages FDI**.
CB	Collective bargaining is a "process of negotiating the terms of employment between an employer and a group of workers. The terms of employment are likely to include items such as conditions of employment, working conditions and other workplace rules, base pay, overtime pay, work hours, shift length, work holidays, sick leave, vacation time, retirement benefits and health care benefits"(Investopedia, 2012). **The negative relationship is found in by UNCTAD in India (however data not available you got to purchase). Therefore the expected outcome is that higher CB will discourage FDI.**
SL FHSKL its	"Skilled labour is defined as labour or work that demands skill and which you usually have to be trained for, or the workers that provide this labour ⇒ a shortage of skilled labour" (Lindert, 2000) (dictionary b. , 2013). **FHSKL is when the skills come from ouside the home nation while ITS are skills related to ITS. As per European Commission using a gravity model equation he found a positive significance and negative significance in SL but the significance level depends on the level depends on the motive. While foreign high skilled labor is foreign in origin. In the same study conducted by the European Commission it was found that "**multinational firms are found to be more productive, larger and more capital- and technology-intensive, to pay higher wages and to employ a more highly skilled labour force. For all these reasons, countries with an increasing share of multinational firms should experience an increase in aggregate productivity and aggregate FDI hence a positive relationship. But the relationships are based on the level of MNC prevalent and there capital and technological intensity therefore this will also explain the negative and no significance relationships encounter in the model. Information technology skills is defined by Bassellier, Reich, and Benbasat (2001) "argue that long tenure in the IT domain is a distinctive competence that improves an organization's ability to obtain a technological advantage" (**Investment Climate Survey results on a sample of eight East Asian countries show evidence of a robust positive correlation between FDI, technological innovation and share of educated workers, and an ambiguous effect of exports.** The overall pooled results for eight East Asian countries of the demand for skills regressions (controlling for country, industry and/or size fixed-effect (Benbasat, 2001) ambiguous or even negative relation show an between exports and share of workers with at least secondary education, but show a robust positive relation between skills, FDI and measures of technological innovation/adoption, which is consistent with

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	the fact that foreign ownership and other technology adoption in East Asia & EU has been skilled biased (Caselli, 2012).the level of skilled human resources will encourage FDI.
sse	**Secondary school enrollment is defined** is "the total enrolment in second-level education, regardless of age, divided by the population of the age-group which officially corresponds to secondary schooling" (SEARO, 2013). While tertiary school enrolment "Total is the total enrolment in tertiary education (ISCED 5 and 6), regardless of age, expressed as a percentage of the total population of the five-year age group following on from secondary school. Leaving "(Bank, 2013). As Per Mascarell's 2011 findings Recent findings have highlighted the constraints faced by foreign firms in their activity due to a lack of physical infrastructure, and skilled workers compared to firms supplying the domestic market ((Mascarell, 2011)). This would give us reasons to suggest that secondary and tertiary FDI are positively correlated with secondary and tertiary school enrolment. These types of FDI require higher levels of education than primary FDI since their supply consists of manufacturing and services, associated with a larger presence of skilled workers in their production functions. However, Walsh and Yu (2010) show that education, measured in school enrolment have little effects on FDI. Their results highlight the negative relationship between secondary and tertiary school enrolment and levels of tertiary FDI. "The reason they provide for this counterintuitive correlation is that current levels of enrolment do not reflect the level of skills attainment in the economy, and that tertiary education is too broad of a criterion, not reflecting the level of specific skills that workers need to encourage more FDI in services". **Therefore the expected outcome is that higher SSE or SET will encourage FDI** ((Walsh J., 2000)
RD	Research and development is defined as "Expenditures for research and development are current and capital expenditures (both public and private) on creative work undertaken systematically to increase knowledge, including knowledge of humanity, culture, and society, and the use of knowledge for new applications. R&D covers basic research, applied research, and experimental development" (Bank, 2013). As per Nicolini study conducted on FDI determinants in the European Region find that's R&D was positively significant in the European Region. However the negative significance Norback using three stage optimization technique finds negative significance with R&D and FDI. (UNCTAD, 2011). (Nicolini, 2006)
Patent	**Patents granted to residents is patents granted** per million people is the "patent" variables definition. Patents in force is a currently executed patent that *"forms protection that provides a person or legal entity with exclusive rights for making, using or selling a concept or invention and excludes others from doing the same for the duration of the patent"* ((words, 2013)). Positive significance is best shows by Zhang et.al 2009 using uneven regional distribution of foreign direct investment (FDI) across Chinese provinces from 1995 to 2006. He finds a positive correlation using Factor analysis and other econometric techniques that patents are positively significant (Nicolini, 2006). Patents granted or patents in force encourage FDI.
Patentforce	

Tech	"The technology index denotes the country's technological readiness. This index is created with such indicators as companies spending on R&D, the creativity of its scientific community, personal computer and internet penetration rates". (GCR, 2004) As per a study conducted by Kamath et.al 2010 on the FDI determinants in India, he finds no significance in his study using OLS regression and other econometric techniques find this result. In Nawani studies his "findings indicate with production processes becoming more complex and technology intensive, domestic technological capabilities, particularly innovative capacities, along with the ability to apply such innovations efficiently through advanced IT-based techniques, have become more important location advantages than cheap labour". **Therefore the expected outcome is that Technology can Encourage FDI or is insignificant**. (Gupta et.al 2009)
roads railraods QofAIR watertransportation DISB Telephone mobile	Roads are measured via the value of paved roads. Railroad is the value of railroad buildings. Quality of air transportation is an index from 1 to 10 that values measure of the quality of air transportation. Water transportation is transportation is an index from 1 to 10 that values measure of the quality of water transportation. Distribution infrastructure is defined as the infrastructure that supports the process of marketing and merchandising goods. Also, the way in which wealth or goods or services are allotted, as in the distribution of wealth. While telephone means telephone mainlines per 1 million people and mobile are mobile phones per million People (IMD, 2013; World Bank 2013). "Bellak *et al.* (2009) use principal component analysis across telecommunication, electricity and transport production facilities to derive an overall infrastructure index and find a positive correlation with FDI. Similarly to these studies they expect that infrastructure will have positive influence on FDI. Based on a panel-gravity model approach Bellak *et al.* (2009) find evidence that FDI in CEECs is attracted by increases in the infrastructure endowment. Especially information and telecommunication as well as transport infrastructure impact on FDI. Goodspeed *et al.* (2006) explain FDI in a broad range of countries and include the consumption of electric power, the number of mainline telephone connections and a composite infrastructure index in their regressions. In a related paper Goodspeed *et al.* (2010) find that a favourable infrastructure endowment attracts FDI to developed as well as less developed countries. Thereby the impact is larger in the latter country group".(Matev et.al , 2012) In terms of telephones and mobiles Alson, Bloom and Canagng conduct an OLS regression on panel data in 1970 and find out that mobiles and phone lines have a positive effect on FDI. Therefore the expected effect is that Physical infrastructure variables encourage FDI.
OP	A nation's "economic measure of output per unit of input on the total number of goods and services. Inputs include labor and capital, while output is typically measured in revenues and other GDP components such as business inventories. Productivity measures may be examined collectively (across the whole economy) or viewed industry by industry to examine trends in labor growth, wage levels and technological improvement ".(words, 2013). **As per**

	the study conducted by Oberhofer and Pfaffermayr (2011) find a significant positive relationship between FDI and OP in the ASEAN using panel data and regression. **Therefore the expected outcome a higher a countries productivity will encourage FDI positively.**
Energyusepercapita	EUPU is measured "GDP per unit of energy use is the PPP GDP per kilogram of oil equivalent of energy use. PPP GDP is gross domestic product converted to current international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as a U.S. dollar has in the United States". (Bank, 2013) **. As per the studies conducted by Hellier et.al 2010 found a positive significance in Energyusepercapita using panel regression and other significant econometric models.** Therefore "Countries with abundant cheap and skilled labor, electricity and energy and countries with improved infrastructure, such as road, port facilities, telephone and internet might significantly and negatively affect the cost of doing business. Thus the availability of cheap and skilled labor, electricity and **energy** and infrastructure thus can significantly affect the inflow of FDI by attracting cost cutting and efficiency seeking foreign investments. (e.g., UNCTAD, 1998; Kinda, 2010).
GFCF	"Gross fixed capital formation is 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". (STATS, 2013) Kumar and Pradhan (2002) analyzed the relationship among FDI, growth and domestic investment for a sample of 107 developing countries for the period 1980-1999. The study extracted from the World Development Indicator, 2001 CD-ROM and used gross fixed capital formation as percentage of GDP as proxy for investment. The study provides empirical evidence that FDI affects domestic investments in a dynamic manner with a negative initial effect and a subsequent positive effect for panel data as well as for most of countries individually. Though, the evidence is mixed as FDI appeared to crowd out domestic investment in general, some countries have had favourable effect of FDI on domestic investment suggesting a role for host country policies". **Therefore the expected outcome is that Higher GFCF is associated with positive FDI performance**
Fixed telephone	**Fixed telephone costs that are the total value of costs incurred on a fixed basis due to the use of telephones. Zurawiki, 2009 mainly negative significance is best described Zurawiki, 2009 who conducted a regression analysis on a study on Kenya from 2000-2010 while positive significance in certain years. Al Electrical cos. Therefore the expected outcome is that higher fixed telephone costs are associated with lower FDI flows.** Piyawatti suggests that A desire to reduce transaction or information costs, and to protect property rights Efficiency seeking (a) of products (b) of processes As above, but include access to market; economies of scope; geographical diversification and international sourcing of inputs (a) Economies of product or specialization and concentration on process (b) Low
Electrical costs	

	costs of labor; incentives to local production; a favorable business environment (a) As for second category, include gains from economies of common governance (b) The economies of vertical integration and horizontal diversification Adapted from: Multinational Enterprises and the Global Economy (2008)" ((Changwatchai, 2009))
Adequecyofcomm	**Communication infrastructure adequacy is providing communications infrastructure to the community both adequate in terms of reach, capacity and can overall improve the lives of people (** (G. Arts, 2008)**). .** Addison and Heshmati (2003) conclude that the wave of democratization9 and, mainly, the spread of technologies of information and communication10 positively affect FDI inflows in developing countries. Therefore the increase in communications infrastructure will encourage FDI.
Energyuse	"Energy use refers to use of primary energy before transformation to other end-use fuels, which is equal to indigenous production plus imports and stock changes, minus exports and fuels supplied to ships and aircraft engaged in international transport" (Bank, 2013) *Moosa et.al finds a positive correlation in energy use and FDI in her extreme bounds analysis (* (Cardak, 2003)*) therefore the expected outcome is hat higher energyuse is associated with positive FDI flows.*
COL	*Cost of living is "*The amount of money needed to sustain a certain level of living, including basic expenses such as housing, food, taxes, and healthcare. Cost of
Apartment	living is often used when comparing how expensive it is to live in one city
Office	versus another" (words, 2013) Apartment renting costs are costs related to renting an apartment in the host country. Office costs are costs of renting and operating an office. In terms of cost of living has a negative impact on FDI as found by Amal et.al using panel data from 1976-2010 concludes that COL has a negative impact on FDI. UNCTAD states that "China continues to **experience rising wages** and production costs, so the widespread off shoring **of low-cost manufacturing to that country has been slowing down** and divestments are occurring from the coastal areas. Meanwhile, structural transformation is shifting FDI inflows towards high technology sectors and services. For instance, FDI in real estate alone accounted for more than 20 per cent of total inflows to China in 2010, and the share was almost 50 per cent in early 2011. Mirroring similar arrangements in some developed countries, China established a joint ministerial committee in 2011 to review the national security implications of certain foreign acquisitions"(**Reference**). However as per data provided Chinese inflation has come down from 6.9% in 2007 to 4.1% by 2010. Here whats has happened is FDI has increased but COI has decreased. Inflation – INF is the home economy's inflation and will have a negative influence on China's inward FDI done by Ping Zheng and Hui Tan in there linear regression done study on Chinese Inward FDI determinants found a significant negative relationship to FDI. Therefore the expected outcome is that higher costs of living discourage FDI.
ImportsofICT	Imports of ICT **is defined as** "Information and communication technology goods imports include telecommunications, audio and video, computer and related equipment; electronic components; and other information and communication technology goods. Software is excluded." (STATS, 2013). **In terms of ICT** Addison and Heshmati (2003) "conclude that the wave of

	democratization and, mainly, the spread of technologies of information and communication positively affect FDI inflows in developing countries". **Therefore the expected outcome is that higher imports of ICT encourage FDI positively.**
exportsofservices	"Exports of goods and services represent the value of all goods and other market services provided to the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude labor and property income (formerly called factor services) as well as transfer payments. Data are in current U.S. dollars. Per $ GDP figures expressed per 1 $ gross domestic product". **(WDI, 2013**). **Hake Et.al "**exports and the outward FDI stock using a panel of industries and seven EU countries for the period 1973-2004" and found positive significance in 1738 observations (Falk, 2008). The negative significance can only be explained through pedorini panel cointegration using panel data from Pham et.al, using panel data 1990-2007 he finds a negative significance for FDI. Therefore the expected outcome is that higher exports of goods and services encourage FDI