Growth Drivers of Greenfield Investment in Pakistan: Time Period of 2002-2017

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Abstract
Purpose:
Greenfield investment as a broad category of FDI ,refers to "When a parent country direct invest in a business or production in the foreign country by employing its new plants and all operational amenities.FDI is highly exaggerated by country's investment climate and bendable economic policies.So,This study involves the relationship between Green Field Investment and its growth drivers.
Research methodology:
The complete study model consists on influence of GDP, Market Capitalization, Human Capital, Trade Openness Corporate Tax and Net Foreign Assets on Green Field Investment. The period is chosen for study is 2002 to 2017 and quantitative data is used for authenticity.EVIEWS as a statistical software is used for data analysis by setting specific criteria for rejection and acceptance of hypothesis.
Findings:
On the basis of results of statistics tools, it is indicated that corporate tax rate and Human Capital having as much impact on green field investment but remaining variables are inconsequential growth drivers of green field investment in Pakistan.
Implications:
Government of Pakistan should make easy entrance for the foreign investors to increase investment in Pakistan. Investment in fixed assets by state will provide collateral to investors. So, investment in fixed capital should be focused.
Keywords: Market Capitalization, Human Capital, Net Foreign Assets, Green Field Investment

1. INTRODUCTION:
1.1. BACKGROUND OF STUDY:
FDI refers to direct investment in a business of a company of foreign country into a host country. According to World Bank's statistics Pakistan is at 61th rank in the world in receiving FDI. FDI has been counted as one of the source of higher economic growth of the country but if we evaluate the climate for FDI in Pakistan, it has remarkably attractive climate for FDI especially in agriculture, IT, telecommunication, power and service sector and automobile sector of Pakistan. So, if there is an addition in FDI in Pakistan it would enhance the asset of currency of home country's GNP, managerial skills and productivity of country.

Broadly FDI is divided into two categories, Green field investment and M&A. Philipp Harms and Pierre-Guillaume Méon,2012[1]defines green field investment is a kind of FDI where investors build its new plant in the host country while M&A is called acquisition of existing company's assets of host country. In addition, Green Field Investment refers to "When a parent country direct invest in a business or production in the foreign country by implementing its new plants and all operational facilities. On the other hand Brown field Investment refers to merger and acquisitions.

According to Investopedia[2]: "Green field investments occur when multinational corporations enter into developing countries to build new factories and/or stores. "Developing countries often offer prospective companies tax-breaks, subsidies and other types of incentives to set up green field investments. Governments often see that losing corporate tax revenue is a small price to pay if jobs are created and knowledge and technology is gained to boost the country's human capital.

Green Field investment as a broad category of FDI, having a huge impact on economic condition of a country. In other words, Green field investment boots economic growth by generating employment for the localities of the host country. Due to implementation of new plants production capacity of demanded goods is equalizes level of supply which will automatically cut off imports on hand and gradually increase in exports. Although, favorable balance of payment is one of the core advantage of Greenfield investment in a country.

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[1] Good and bad FDI: The growth effects of greenfield investment and mergers and acquisitions in developing countries: Philipp Harms and Pierre-Guillaume Méon,2012.
[2] www.investopedia .com

Pakistan has a favorable investment climate for all the investors, foreign as well as domestic. Providing protectionism to the local investors is the basic duty of regime of every economy but on the other had tradeopeness should be the primary duty of a country's regime. To attract foreign investments tariff relaxation policies and trade agreement among states are introduced such as CPEC.Increase in foreign investment gives threat to the local investors so that increase in competition leads to improve in production, flow of capital in the stock market as well.GDP is the core indicator of economic health of a country which is also affected by degree of production and investment in a country.

Pakistan, as a developing country has a lack of technological advancement in production process of goods and services. Through Greenfield investment foreign goods and expertise would utilize and practiced in the country. So that technological advancement and infrastructure developments are the resultant factors of foreign investments.

GREEN FIELD INVESTMENT TREND IN PAKISTAN:

GREEEN FELD million us dollar
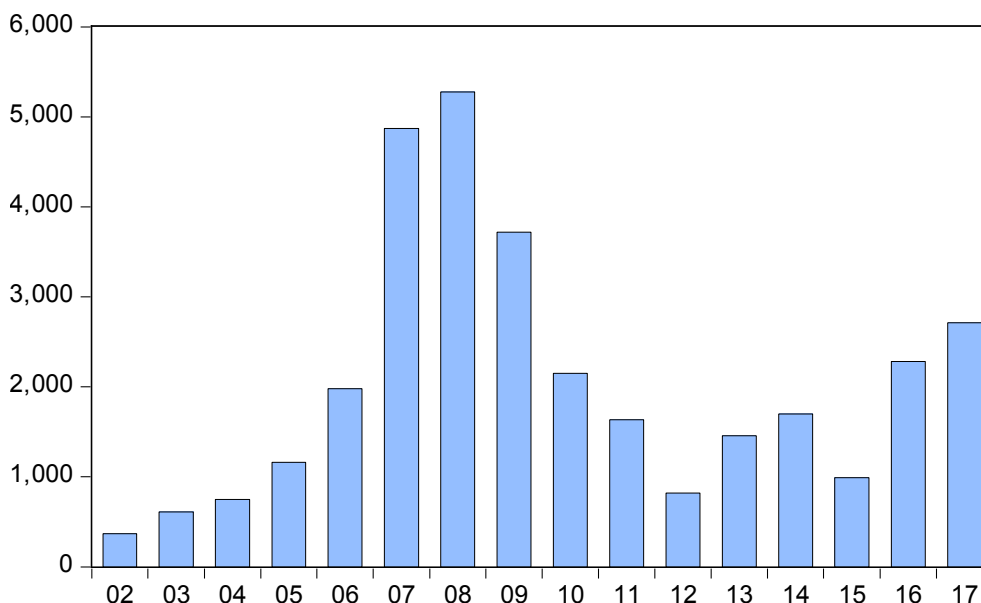
Above graph indicates flow of Greenfield investment in Pakistan during 2002-2017.In this time period different regimes ruled over and different economic policies introduced in the terms of expansion or contraction in trade tariffs. In 2008, green field investment was at highest peak which indicates that favorable economic conditions or other determinants which attracted Greenfield investment at that time.

The following factors are the determinants of Green Field Investment in an economy:
- Tariff reforms
- Tax rates
- Repatriation Policy of Profit
- Market size
- Infrastructure of Country
- Political stability
- Financial Stability

Scope of Study:

This study will be beneficial for:
- Government of Pakistan to develop strategies for those factors which are influencing negatively and positively green field investment.
- State Bank to adopt policies which can create favorable environment for growth of economy.
- Ministry of Finance to take reforms which are beneficial for investors and economy as well.
- For investors to avail investment opportunities in Pakistan.

Objective of Study:

This study is conducted to determine the influence of the following on Green Field Investment in Pakistan from 2002-2017:
- Gross Domestic Product(GDP)
- Trade openness
- Human Capital

> ➢ Net Foreign Assets
> ➢ Corporate Tax Rate
> ➢ Market Capitalization

LITERATURE REVIEW:

Following literatures are reviewed in order to understand relationship among variables:

Prof.Talat Afza[1] published in an article named green field investment in Pakistan regarding economic growth and green field investment in developed and developing countries and stated that FDI is highly affected by socio economic and geographic location of country. In order to investigate the relationship among variables he took socio economic political factors and geographical factors as independent variables. He also highlighted role of financial institution in attracting FDI in an economy.

In 2011, Mr.Philipp Harms and Mr. Pierre Guillaume Meon[2] published in an article named "The growth effects of green field investment and mergers and acquisition in developing countries" and stated that the some macro-economic variables do not give impact on FDI while other macroeconomic variables have side effects on FDI such as currency appreciation or other factors.

In 2011,Mr.Ralf Kruger[3] published in an article of UNCTAD named "Foreign Direct Investment-Trends and Determinants "and found that in developing countries Green field investment is at the peak but do not hold shares in Energy sectors.

In 2008, Mr.Muhammmad Zakaria[4] published in an article of MPRA named "Investment in Pakistan" and stated that government of Pakistan should focus on short term priority of foreign earning and investment sector. In addition he suggested policies to government to improve investment policies regarding foreign sector of earning.

In 2011, Mr.Larry D.Qiu and Mr.Shengzu[5] Wang published in the journal "Review of International Economics "named "FDI policy-Green field investment and cross border mergers" and stated that green field investment and mergers-acquisitions are welfare for host country. In addition they also focused on entry mode of different organizations for green field investment and mergers.

In 2010 Mr.Xueli[6] published in journal of International Business and research vol.3.No.1 named "A literature review on the relationship between FDI and Economic growth" regarding impact of economic growth in developing countries and stated that FDI has positive impact on economic growth and can bring technological change in economy.

In 2004, Mr.Cesar[7] Calderon published in research journal named "Green field Foreign Direct investment and mergers and acquisition: feedback and macroeconomics variables" regarding impact of FDI on developing countries and stated that FDI is the main cause of expansion of M&A sales.

In 2011, Mr.Khalil Hamdani[8] published in an article in Columbia FDI profiles named "Inward FDI policy and its policy context" regarding policy regimes and FDI in Pakistan and suggested that there is a need of consideration in private sector market potential to attract investors.

In 2002, it is published in article of OECD named "Foreign Direct Investment for development" regarding role of FDI for development of economic growth and stated that FDI creates competition in host country between domestic and foreign investment and drives efficient and low cost production in a country.

In 2012, Mr.Hyung-suk-Byung[9] published in journal, JEL classification F21, F23, G15 named "Assessing and examining factors influencing green field and mergers in developing countries" and stated that regional and global factors spillovers on Greenfield and mergers decision. He further said that financial stability of emerging countries is negatively associated with M&A sales.

In an article named "Determinants of Green field investment in business services "using panel data method in BRICS countries and found that corporate tax rate is highly correlated with FDI in Greenfield business service

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[1] Greenfield in Pakistan: "Is It Really Green"? An empirical Investigation Talat Afza & M. Mahmood Shah Khan
[2] Good and bad FDI: The growth effects of greenfield investment and mergers and acquisitions in developing countries (This version: June 13, 2012)
[3] Foreign Direct Investment –Trends and Determinants Ralf Krüger Division on Investment and Enterprise, UNCTAD Workshop   on FDI in Advanced Fossil Fuel Technologies Dushanbe, Tajikistan13 September 2011
[4] Investment in Pakistan: A Critical Review MPRA Paper No. 11543, posted 12. November 2008
[5] FDI Policy, Greenfield Investment and Cross-border Mergers Review of International Economics, 19(5), 836–851, 2011
[6] A Literature Review on the Relationship between Foreign Direct Investment and Economic Growth:Internatonal business research VOL3 No.1(2010)
[7] GREENFIELD FOREIGN DIRECT INVESTMENT AND MERGERS AND ACQUISITIONS: FEEDBACK AND MACROECONOMIC EFFECTS*
[8] Inward FDI in Pakistan and its policy context: Country profiles of inward and outward foreign direct investment issued by the Vale Columbia Center on Sustainable International Investment January 18, 2011
[9] Assessing Factors Affecting M&As versus Greenfield FDI in Emerging Countries ADB Economics Working Paper Series No. 293 ,November 2012

sector.In addition,Cophen Hagen(2016)[1] conducted a study on the scoreboard of FDI of European countries and concluded that United Kingom is at the 5th rank of FDI in the world and the main reason is the expansion of monetary policies such as stability of corporate tax rate.

In 2011, Mr.Muhammad Arshad Khan[2] published in PIDE working papers named "FDI and Economic growth-A sectoral analysis "and stated that there is a unidirectional causality between FDI and real output.

In 2012, Mr.Martin Falk [3]published in FIW research report named "Factors affecting FDI location choice in knowledge incentive business service" stated that corporate tax, low costs, labor wages, education and common language play a vital role in FDI.

In 2013, Ms.Deepa Mani[4] published in a paper named "Green field Investment versus Acquisitions: Capital market drivers of R&D organization in technology" regarding pros and cons of Greenfield investment and acquisition and stated that returns, profitability and growth of market are highly correlated with GDI wholly owned subsidies.

Research Methodology:
Data Collection Technique:
As there are two methods of collecting data Primary and Secondary, but this study is totally based on Secondary data.
Sources of Secondary Data:
- World Bank Statistics
- Articles, Journals and Publications
- State bank of Pakistan's annual records of trade and payments
- Financial market data from State Bank of Pakistan
- Monetary policy Statements
- Economic Intelligence Unit
- Fiscal Policy Statements

Sample Size:
Time period from 2002-2017 is taken as a sample period to check influence of different regimes and implemented policies in the investment perspectives.

Modeling Frame work:
Econometric Model:
$Y= \beta + \beta (\chi) + \beta (\chi) + \ldots\ldots\ldots\ldots\ldots + \mu$
Model Driven:
$GRNFLD = \beta + \beta\ CORPTAX + \beta\ TRADEOPENESS + \beta\ GDP + \beta\ EXCHANGERATE + \beta\ MCAP + \beta\ NFA + \beta\ HUMAN\ CAPITAL + \mu$
EXPECTED SIGNS:
- $\beta = ?$
- $\beta < 0$
- $\beta > 0$
- $\beta > 0$
- $\beta < 0$
- $\beta > 0$
- $\beta > 0$
- $\beta > 0$

HYPOTHESIS:
Hi : Corporate Tax rate gives impact on Green field investment.
H   : Corporate Tax rate does not give impact on Green field investment.
Hi : Trade openness gives impact on Green field investment.
H   : Trade openness does not give impact on Green field investment.
Hi : GDP gives impact on Green field investment.
H   : GDP does not give impact on Green field investment.
Hi : Market Capitalization gives impact on Green field investment.

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[1] Towards a Foreign Direct Investment Attractive Scoreboard
[2] Foreign Direct Investment and Economic Growth in Pakistan:A Sectoral Analysis PIDE Working Papers 2011: 67
[3] Factors influencing the FDI Location choice for knowledge intensive services and headquarters within the EU and Austria
[4] Greenfield Investments Versus Acquisitions: Capital Market Drivers of R&D Organization in Technology-Intensive Industries

H : Market Capitalization does not give impact on Green field investment.
Hi : Corporate Tax rate gives impact on Green field investment.
H : Corporate Tax rate does not give impact on Green field investment.
Hi : Net Foreign Assets give impact on Green field investment.
H : Net Foreign Assets do not give impact on Green field investment.
Hi : Human Capital gives impact on Green field investment.
H : Human Capital does not give impact on Green field investment.

Data Handling:
Data is handled through EVIEWS software by analyzing statistical tests:

Statistical Tests:
- level of significance=95%
- Probability≤0.05
- Correlation

Results Estimation:
DESCRIPTIVE STATISTICS TABLE:

	CORP_TAX_RATE	EXCNGRTE	GDP	GREEEN_FELD_MILLION_US_D	HUMAN_CAPITAL	MCAP_MILLION_RS	NET_FOREIGN_ASSETS	TRADE_OPENNESS_TRADE__
Mean	0.373125	79.17159	15883998	2030.069	0.519500	3976265.	7.64E+11	31.67950
Median	0.350000	81.15000	14033352	1666.700	0.523000	3403398.	7.67E+11	32.82500
Maximum	0.500000	104.6971	31962610	5277.000	0.550000	9522358.	1.36E+12	35.68173
Minimum	0.310000	57.57450	4920549.	367.8000	0.465000	411576.0	2.77E+11	25.30623
Std. Dev.	0.054371	18.96678	9155839.	1468.353	0.027442	2666499.	2.83E+11	3.159007
Skewness	1.160343	0.129481	0.376001	1.065119	-0.577086	0.637930	0.464451	-0.764123
Kurtosis	3.248794	1.356121	1.740970	3.109599	2.260365	2.371188	2.970009	2.710296
Jarque-Bera	3.631657	1.846265	1.433776	3.033282	1.252783	1.348816	0.575840	1.612977
Probability	0.162703	0.397273	0.488269	0.219448	0.534517	0.509458	0.749822	0.446423
Sum	5.970000	1266.745	2.54E+08	32481.10	8.312000	63620237	1.22E+13	506.8720
Sum Sq. Dev.	0.044344	5396.082	1.26E+15	32340889	0.011296	1.07E+14	1.20E+24	149.6899
Observations	16	16	16	16	16	16	16	16

 The above table shows the mean, median, standard deviation of each variable, the highest the mean and standard deviation show highest deviation in data.

Correlation Matrix:

	CORP_TAX_RATE	EXCNGRTE	GDP	GREEEN_FELD_MILLION_US_D	HUMAN_CAPITAL	MCAP_MILLION_RS	NET_FOREIGN_ASSETS	TRADE_OPENNESS_TRADE
CORP_TAX_RATE	1.000000	-0.754912	-0.807287	-0.452810	-0.950138	-0.795229	-0.565959	0.279546
EXCNGRTE	-0.754912	1.000000	0.974284	-0.082816	0.900026	0.837821	0.505168	-0.640369
GDP	-0.807287	0.974284	1.000000	0.011694	0.923858	0.926682	0.569961	-0.677562
GREEEN_FELD_MILLION_US_D	-0.452810	-0.082816	0.011694	1.000000	0.212744	0.202709	0.137556	0.172270
HUMAN_CAPITAL	-0.950138	0.900026	0.923858	0.212744	1.000000	0.865472	0.575080	-0.416814
MCAP_MILLION_RS_	-0.795229	0.837821	0.926682	0.202709	0.865472	1.000000	0.613565	-0.648543
NET_FOREIGN_ASSETS	-0.565959	0.505168	0.569961	0.137556	0.575080	0.613565	1.000000	-0.576032
TRADE_OPENNESS_TRADE	0.279546	-0.640369	-0.677562	0.172270	-0.416814	-0.648543	-0.576032	1.000000

In the above correlation matrix relation between each pair of variable has been shown. According to designed model, correlation of green field investment with independent variables is highlighted.

Inferences:

Dependent Variable	*Independent Variable*	*Comments*
GREENFIELD INVESTMENT	CORPORAT TAX RATE	NEGATIVELY AND VERY LOW CORRELATED WITH EACH OTHER
GREENFIELD INVESTMENT	EXCHANGE RATE	VERY LITTLE NEGATIVE CORRELATION IS EXISTED.
GREENFIELD INVESTMENT	GDP	VERY LITTLE POSITIVE CORRELATION IS EXISTED
GREENFIELD INVESTMENT	HUMAN CAPITAL	VERY LITTLE POSITIVE CORRELATION IS EXISTED
GREENFIELD INVESTMENT	MARKET CAPITALIZATION	VERY LITTLE POSITIVE CORRELATION IS EXISTED
GREENFIELD INVESTMENT	NET FOREIGN ASSETS	VERY LITTLE POSITIVE CORRELATION IS EXISTED
GREENFIELD INVESTMENT	TRADE OPENESS	VERY LITTLE POSITIVE CORRELATION IS EXISTED

REGRESSION EQUATION:

Dependent Variable: LOG(GREEEN_FELD_MILLION_US_D)

Method: Least Squares

Date: 09/10/18   Time: 11:22

Sample: 2002 2017

Included observations: 16

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	58.96824	15.50318	3.803622	0.0052
LOG(MCAP_MILLION_RS_)	1.242122	0.583151	2.130020	0.0658
LOG(TRADE_OPENNESS_TRADE____)	-2.260398	1.987569	-1.137268	0.2883
LOG(NET_FOREIGN_ASSETS)	-0.355695	0.294792	-1.206597	0.2621
CORP_TAX_RATE	**-35.58340**	**7.203138**	**-4.939986**	**0.0011**
EXCNGRTE	0.068507	0.042126	1.626220	0.1426
GDP	-1.75E-07	8.75E-08	-1.994245	0.0812
HUMAN_CAPITAL	**-80.85228**	**34.47714**	**-2.345098**	**0.0470**

R-squared	0.910039	Mean dependent var	7.369452
Adjusted R-squared	0.831324	S.D. dependent var	0.747029
S.E. of regression	0.306806	Akaike info criterion	0.781653
Sum squared resid	0.753041	Schwarz criterion	1.167947
Log likelihood	1.746779	Hannan-Quinn criter.	0.801434
F-statistic	11.56113	Durbin-Watson stat	2.706907
Prob(F-statistic)	0.001275		

(b) Results

In the above equation: R Square show Coefficient of Determination defines the square of Coefficient of Correlation. The R Square value (0.910039) means 91.003% reliable to be used for estimation of population. The Std. Error is important because they reflect how much sampling Fluctuation a statistic will show. The R change shows the differences between R-value & Adjusted R square.

The Prob. (F-statistic) shows the combination of all variables and overall significance of the Model. In the above equation probability (F-Statistic) value 0.001275 indicates that model is fit and significant for estimating equation.

Inferences:

Dependent variable: LOG(GREEEN_FELD_MILLION_US_D)

Independent Variable	Coefficient	t-value	Probability	Label of variable for forecasting model
CORP_TAX_RATE	**35.58340**	**-4.939986**	**0.0011**	**SIGINFICANT**
EXCNGRTE	0.068507	1.626220	0.1426	**INSIGNIFICANT**
GDP	-1.75E-07	-1.994245	0.0812	**INSIGNIFICANT**
HUMAN_CAPITAL	**-80.85228**	**-2.345098**	**0.0470**	**SIGNIFICANT**
LOG(MCAP_MILLION_RS_)	1.242122	2.130020	0.0658	**INSIGNIFICANT**
LOG(NET_FOREIGN_ASSETS)	-0.355695	1.206597	0.2621	**INSIGNIFICANT**
LOG(TRADE_OPENNESS_TRADE___)	-2.260398	-1.137268	0.2883	**INSIGNIFICANT**

(d) Forecasted Model

LOG(GREEEN_FELD_MILLION_US_D)=58.96824+1.2421(0)-2.2603(0)-0.3556(0)- **35.583(CORPTAX RATE)**+0.0685(0)-1.75E-07(0)-**80.8522(HUMAN_CAP)**

Conclusion

Green field Investment is the major source of creating income source of an economy. From mid-90's Green Field Investment was on the peak in Pakistan but from the mid of 2000's it started decline by 27.3% in 2012 according to State Bank of Pakistan. So, this study is conducted to highlight those factors which are driving forces of Green Field Investment in Pakistan.

For this purpose Green Field Investment is taken as a dependent variable while GDP, Market Capitalization, Human Capital, Net Foreign Assets, Corporate Tax rate, Trade openness, Exchange rate are taken as independent variables. Data is analyzed through Eviews software, the above analysis shows that GDP, Market Capitalization, Exchange rate, Net Foreign Assets, trade openness are statistically insignificant with beta sign because the value of probability lies on rejected region>5% with assumed beta sign while corporate tax rate and Human Capital lie in acceptable region .So,it is indicated that corporate tax rate and Human Capital having as much impact on green field investment but remaining variables are inconsequential growth drivers of green field investment in Pakistan.

Recommendations

This study recommends following points to attract Green Field Investment:
- ➤ Government of Pakistan should make easy entrance for the foreign investors to increase investment in Pakistan.
- ➤ Investment in fixed assets by state will provide collateral to investors.So, investment in fixed capital should be focused.
- ➤ Net foreign assets must be balance to show financial stability of country.

Direction for further Research

Brown field investment is declining in Pakistan during last decades. There is a need of study on Brownfield investment in order to cover following aspects:
- ➤ Push and Pull factors of Brownfield Investment
- ➤ Contribution in economic growth

References:

Internet:
www.sbp.org.pk/about/speech/2003.pdf/april/10/2012-2017
www.finance.gov.pk/articals/pakistan%20export%20what%20need%20to%20be%20don,pdf/april/17/2011
www.jang.com.pk/thenews/mar2010-weekly/busrev-01-03-2010/p5.htm/april/21/2011
www.forexpk.com/sbpdiary/sbp-news/banking-sector-ref/may/05/2012
www.forexpk.com/sbpdiary/sbp-news/banking-sector-ref/may/15/2011
www.scribd.com/doc/38217389/Boom-of-Banking-Industry-in-Pakistan/may/15/2012
www.indianmba.com/Faculty_Column/FC499/fc499.html/may/15/2011
www.skyscrapercity.com/archive/index.php/t-380831-p-2.html/may/21/2012
www.tradingeconomics.com/
www.finance.gov.pk/

www.kse.com.pk/

www.world bank.com/

Research journals and articles:

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Mr.Philipp Harms and Mr. Pierre Guillaume Meon Email:philipp.harms@uni-mainz.de. JEL classification: F21, F23, F43, O16.

Mr. Ralf Kruger published in Division on Investment and Enterprise, UNCTAD, Workshop on FDI in Advanced Fossil Fuel Technologies, Dushanbe, Tajikistan, and 13 September 2011

Mr.Muhammmad Zakaria published in an article MPRA Paper No. 11543, posted 12. November 2008

Mr.Larry D.Qiu and Mr.Shengzu publication of *Review of International Economics, 19(5), 836–851, 2011*.DOI:10.1111/j.1467-9396.2011.00984.x

Mr.Xueli publication on International Business Research,vol 3.no.1,January 2010

Mr.Cesar Calderon publication of World Bank Policy Research Working Paper 3192, January 2004

Mr.Khalil Hamdani published in Country profiles of inward and outward foreign direct investmentissued by the Vale Columbia Center on Sustainable International Investment

January 18, 2011

Mr.Hyung-suk-Byung publication in journal, JEL classification F21, F23, G15

Mr.Martin Falk published in FIW-Research Reports 2012/13

Ms.Deepa Mani publications of 35th DRUID Celebration Conference 2013, Barcelona, Spain, June 17-19

2016Erik Canton and Irune Solera,” Greenfield Foreign Direct Investment and Structural Reforms in Europe:What Factors Determine Investments?”june 2016.

Jose Ramon Perea and Matthew Stephenson,” Outward FDI from Developing Countries” Global Investment Competitiveness Report 2017/2018, doi: 10.1596/978-1-4648-1175-3.

Corp tax rate

EXCNGRTE

GDP

GREEEN FELD million us dollar

HUMAN CAPITAL

MCAP MILLION RS.

net foreign assets

TRADE OPENNESS Trade (% of GDP)