

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,2012¹defines 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 Investopedia²: "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

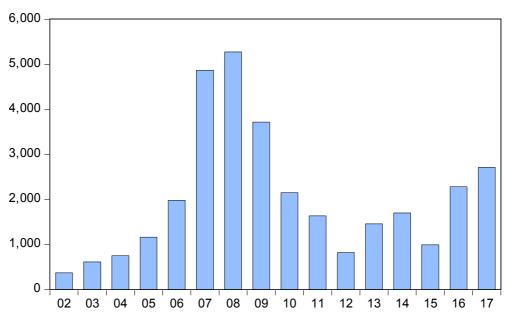


Pakistan has a favorable investment climate for all the investors, foreign as well as domestic. Providing protectionism to the local investors is the basic duty of regime of every economy but on the other had tradeopeness should be the primary duty of a country's regime. To attract foreign investments 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:

- Sovernment 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 Afza¹ 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 Meon² 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 Kruger³ 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 Zakaria⁴ 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.Shengzu⁵ 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.Xueli⁶ 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 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 Hamdani⁸ 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-Byung⁹ 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

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

⁵FDI 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)

 $^{^7\,\}mathrm{GREENFIELD}$ 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 Khan² 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 ³published 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 Mani⁴ 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

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:

 $Y=\beta$ + β (χ)+ β (χ)+....+ μ

Model Driven:

GRNFLD=β +β CORPTAX+β TRADEOPENESS+β GDP+β EXCHANGERATE+β MCAP+β NFA+β HUMAN CAPITAL+µ

EXPECTED SIGNS:

- $\beta = ?$
- $\beta < 0$
- $\beta > 0$
- β >0
- β <0
- β >0
- β >0
- $\beta > 0$

HYPOTHESIS:

Hi : Corporate Tax rate gives impact on Green field investment.

: Corporate Tax rate does not give impact on Green field investment.

Hi: Trade openness gives impact on Green field investment.

: Trade openness does not give impact on Green field investment.

Hi : GDP gives impact on Green field investment.

: GDP does not give impact on Green field investment.

Hi: Market Capitalization gives impact on Green field investment.

¹ Towards a Foreign Direct Investment Attractive Scoreboard

² Foreign Direct Investment and Economic Growth in Pakistan: A Sectoral Analysis PIDE Working Papers

 $^{2011:\}overline{67}$ 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:

				GREEEN FELD				TRADE OPENN
	CORP_TAX_RA					MCAP MILLIO	NET FOREIGN	
	TE	EXCNGRTE	GDP	D	AL	N_RS_	ĀSSETS	
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:

				CDEEDS: FE				TRADE ORE
				GREEEN_FE				TRADE_OPE
	CORP_TAX_	EXCNGRT		LD_MILLION	HUMAN_CAPIT	MCAP_MILLION_	NET_FOREIG	NNESS_TRA
	RATE	E	GDP	_US_D	$A\bar{L}$	RS_	N_ASSETS	DE
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_M								
ILLION_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_ASS								
ETS	-0.565959	0.505168	0.569961	0.137556	0.575080	0.613565	1.000000	-0.576032
TD ADE OPENNEGO								
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	<u>Comments</u>				
GREENFIELD	CORPORAT TAX RATE	NEGATIVELY AND VERY LOW CORRELATED				
INVESTMENT		WITH EACH OTHER				
GREENFIELD	EXCHANGE RATE	VERY LITTLE NEGATIVE CORRELATION IS				
INVESTMENT		EXISTED.				
GREENFIELD	GDP	VERY LITTLE POSITIVE CORRELATION IS				
INVESTMENT		EXISTED				
GREENFIELD	HUMAN CAPITAL	VERY LITTLE POSITIVE CORRELATION IS				
INVESTMENT		EXISTED				
GREENFIELD	MARKET CAPITALIZATION	VERY LITTLE POSITIVE CORRELATION IS				
INVESTMENT		EXISTED				
GREENFIELD	NET FOREIGN ASSETS	VERY LITTLE POSITIVE CORRELATION IS				
INVESTMENT		EXISTED				
GREENFIELD	TRADE OPENESS	VERY LITTLE POSITIVE CORRELATION IS				
INVESTMENT		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 LOG(MCAP_MILLION_RS_) LOG(TRADE_OPENNESS_TRADE) LOG(NET_FOREIGN_ASSETS) CORP_TAX_RATE EXCNGRTE GDP HUMAN_CAPITAL	58.96824 1.242122 -2.260398 -0.355695 -35.58340 0.068507 -1.75E-07 -80.85228	15.50318 0.583151 1.987569 0.294792 7.203138 0.042126 8.75E-08 34.47714	3.803622 2.130020 -1.137268 -1.206597 - 4.939986 1.626220 -1.994245 - 2.345098	0.0052 0.0658 0.2883 0.2621 0.0011 0.1426 0.0812 0.0470
R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic)	0.910039 0.831324 0.306806 0.753041 1.746779 11.56113 0.001275	Mean dependent var S.D. dependent var Akaike info criterion Schwarz criterion Hannan-Quinn criter Durbin-Watson stat	n	7.369452 0.747029 0.781653 1.167947 0.801434 2.706907

(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_A SSETS)	-0.355695	1.206597	0.2621	INSIGNIFICANT
LOG(TRADE_OPENNE SS_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:

- Sovernment 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

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