Tsaurai, Kunofiwa

Article

Does trade openness and foreign direct investment complement or substitute each other in poverty alleviation?

EuroEconomica

Provided in Cooperation with:
Danubius University of Galati

Reference: Tsaurai, Kunofiwa (2018). Does trade openness and foreign direct investment complement or substitute each other in poverty alleviation?. In: EuroEconomica 37 (1), S. 223 - 236.

EE
E u r o E c o n o m i c a
Issue 1(37)/2018 *ISSN: 1582-8859*

Does Trade Openness and Foreign Direct Investment Complement or Substitute Each Other in Poverty Alleviation?

Kunofiwa Tsaurai[1]

Abstract: This paper investigated whether trade openness and foreign direct investment (FDI) complemented or substituted each other in alleviating poverty in European, Latin American and Asian emerging markets using panel data analysis with data ranging from 1994 to 2014. The study found out that trade openness and FDI neither complimented nor substituted each other in the process of alleviating poverty. The implication of the study is that European, Latin American and Asian emerging markets studied should increase their levels of trade openness in order to accelerate poverty reduction. They should also avoid relying on FDI as a source of capital for their economic activities and poverty reduction efforts as that could easily achieve the opposite unintended outcome in line with the dependency theory of FDI. As per expectation, control variables such as human capital development, education and infrastructural development were found to have had a poverty reduction effect whilst inflation increased the poverty levels. These emerging markets should therefore increase their investment towards human capital development, education and infrastructural development in order to reduce poverty levels. However, FDI and remittances increased poverty levels possibly because there are certain pre-conditions that must exist before FDI and remittances can contribute to poverty alleviation.

Keywords: Poverty; Trade Openness; FDI; Emerging Markets

JEL Classification: F41; F21; I32; P2

1. Introduction

This section describes background of the study, problem statement, research gap, contribution of the paper and shows how the rest of the paper is organized.

Background of the study: According to Winters et al (2004), there is a possibility that trade openness can expose the poor to increased poverty even though majority of economists are of the opinion that open economies perform better in comparison to the closed ones. In other words, the impact of trade openness on the poor remain unpredictable despite the fact that the trade theory according to Goff and Singh (2014) says that trade liberalisation act as an incentive for investment, opens up fresh ideas and innovation and minimises the rent seeking activities, all of which are necessary factors which enhances economic growth.

On the other hand, UNCTAD (2012) noted that FDI inflow has recently been the key pillar behind economic growth in emerging markets in line with the dictates of the endogenous growth, modernization and neoclassical growth theories. This has been validated beyond any reasonable doubt by majority of prior empirical studies which found out that FDI reduced poverty levels through its positive influence on

[1] Associate Professor, Department of Finance, Risk Management and Banking, University of South Africa, South Africa. Corresponding author: tsaurk@unisa.ac.za.

economic growth. Apart from empirical studies which investigated the direct impact of FDI on poverty being scant, the subject on channels through which either trade openness or FDI affect poverty levels have not been adequately addressed in literature. The exception is Goff and Singh (2014) whose study observed that trade openness reduces poverty levels in countries whose institutions, education standards and financial sectors are not only strong but also deep.

Whilst both trade openness and FDI have been insinuated in literature as variables that separately reduce poverty via the economic growth channel, the combined direct effect of trade openness and FDI on poverty alleviation has so far been given very little attention by prior empirical work. The paper's contribution to literature lies in exploring the complementarity or substitutability between trade openness and FDI in alleviating poverty in selected emerging markets, which have been the major recipients of FDI and increased trade openness during the last two decades, following Cavusgil et al (2013).

Problem statement, Research gap and Contribution of the paper: There is overwhelming evidence that trade openness and FDI separately and individually contributes towards poverty reduction (see section 2 and 3). Although there are some minor contradictions, it is no longer a contestable issue in the literature that trade openness or FDI alleviate poverty. What the existing empirical literature has done to the best of the author's knowledge is to ignore the possibility that trade openness and FDI may complement or substitute each other in the process of reducing poverty levels. The closest studies (Bharadwaj, 2014; Lee & Vivarelli, 2006; Ravallion, 2003; Santarelli & Figini, 2004) focused on whether globalization reduced poverty levels. These studies separately used trade openness and FDI as the proxies of globalization, evidence that they treated the two variables exclusively as substitutes. The current study deviates from the existing studies on globalization-poverty nexus in that it specifically explores whether trade openness and FDI complemented or substituted one another in the process of reducing poverty in the selected emerging markets. To the best of the author's knowledge, such a study has not yet been done.

Structure of the paper: Section 2 discusses theoretical and empirical literature on trade openness-poverty nexus, section 3 is theory and empirical work on FDI and poverty whereas section 4 shows and discusses trade openness, FDI and poverty trends in European, Latin American and Asian emerging markets. Section 5 is research methodology which includes estimation techniques, analysis and interpretation of the results. Section 6 concludes the study whilst section 7 lists all the used references in full.

2. Trade Openness and Poverty –Theoretical and Empirical Literature

The dynamic perspective view of the trade openness-poverty nexus is that favourable trade openness policies lead to economic growth, which in turn reduce poverty levels. For example, Goff and Singh (2014) argued that trade liberalisation act as an incentive for investment, opens up fresh ideas and innovation and minimises the rent seeking activities, all of which are necessary factors which enhances economic growth.

Balassa (1978) and Chenery and Strout (1966) noted that trade openness promotes exports growth, which in turn brings in the much needed foreign exchange necessary to pay for the imported capital equipment that drives up output and economic growth. Trade openness enables a country to have access to

international financial markets, superior management practices, learn by doing expertise and advanced technologies thereby easily benefiting economically from stimulated technological diffusion. (Hart, 1983)

On the contrary, when domestic firms are exposed to foreign competition due to increased trade openness, they are likely to retrench some of the workers in order to cut costs and remain competitive. (Goldberg & Pavenik, 2003) This increases poverty levels among the laid off employees. In the event that trade liberalization comes with technical change that is skill-biased, unskilled labour force may lose their jobs whilst the skilled ones' benefit. (Winters et al., 2004) This was supported by Gourdon et al (2008) whose study observed that factor proportions theory of trade argues that trade liberalisation in poor countries increases poverty and inequality especially when the level of education among the people is quite low. Table 1 summarizes the empirical literature on the relationship between trade openness and poverty alleviation.

Table 1. Trade openness-poverty nexus –Empirical literature

Author	Country/Countries of study	Methodology	Research findings
Jenkins (2004)	Vietnam	Cross sectional regression analysis	Exports had a significant positive impact on employment whereas imports negatively influenced production and employment.
Dollar and Kraay (2004)	Developing countries	Cross sectional regression analysis	Globalization and trade openness enhanced economic growth and reduced poverty levels in developing countries.
Avelino et al (2005)	Latin America	Ordinary least squares (OLS)	Trade openness had a positive impact on education, social security expenditures and poverty reduction in Latin America.
Bhagwati and Srinivasan (2002)	China and India	Time series data analysis	Integration into the world economy not only improved economic growth but led to poverty alleviation in China and India.
Montalbano (2011)	Developing countries	Literature review analysis	Trade openness reduced vulnerability and poverty levels in developing countries.
Ravallion (2006)	China and Morocco	Cross country and time series analysis	The combination between trade openness and social protection programmes were found to have been instrumental in reducing poverty.
Neumayer and Soysa (2005)	East Europe and Central Asia, Latin America and Caribbean, Sub-Saharan Africa and Middle East and Northern Africa.	Panel ordinary least squares	Trade openness was found to have had a significant impact on child labour reduction and poverty across all the countries studied.
Winters et al (2002)	Developing countries	Panel data analysis	Poverty and vulnerability among the poor went down in response to higher levels of trade openness in developing countries in the long run. In the short run, the poor were not able to effectively adjust and protect themselves against the adverse effects of trade reforms.
Goff and Singh (2014)	Africa	Panel data analysis	A non-linear relationship between trade openness and poverty was detected in African countries. Trade openness was found to have had a positive and significant impact on poverty reduction on condition that institutions are strong, financial sectors are deep and education levels are high.

Tsai and Huang (2007)	Taiwan	Time series regression analysis	Trade openness was found to have indirectly positively affected poverty reduction through its economic growth enhancement effect both in the short and long run in Taiwan. Trade openness also had a direct wealth distribution effect thereby leading to poverty alleviation in Taiwan.
Daumal (2013)	India and Brazil	Time series regression analysis	Trade openness was instrumental in reducing regional inequalities in Brazil. On the contrary, regional inequalities were exacerbated by an increase in trade openness in India.
Gourdon et al (2008)	Developed, East Asia and South Asian countries	Panel data analysis	Poverty and inequality were exacerbated by trade openness especially when education among the poor people is very low.
Slddiqui and Kemal (2006)	Pakistan	Time series regression analysis	Trade liberalization had a negative influence on remittances inflow into Pakistan. It is through this deleterious effect on remittances inflow that trade liberalization led to an increase in poverty levels in Pakistan.
Rivas (2007)	Mexico	Time series regression analysis	Mexican regions characterized by low levels of education had their inequality levels reduced by trade openness. Poverty levels declined due to higher trade openness in Mexican regions whose income and infrastructural development levels were high.
Santarelli and Figini (2004)	Developing countries	Panel data analysis	The number of people living in poverty was significantly reduced by trade openness in developing countries.

Source: Author compilation

3. FDI and Poverty –Theoretical and Empirical Literature

The influence of FDI on poverty happens through the economic growth channel. In other words, FDI positively affect economic growth, which in turn boost gross domestic product per capita, wealth levels and poverty reduction. According to Kumar and Pradhan (2002), FDI inflow into the host country is accompanied by a bundle of resources such as managerial skills, organizational skills, capital and market net-working capabilities, which are all necessary ingredients for economic growth. Another view which was promulgated by Nath (2005) is that FDI inflow enhances total factor productivity and capital accumulation, both of which are instrumental in promoting economic growth. On the other hand, Calvo and Sanchez-Robles (2002) noted that FDI positively and significantly impact on economic growth through its ability to instigate capital and technology transfer from the home to the host country. However, the dependency theory of FDI argue that over-relying on FDI is retrogressive as it has deleterious effects on income distribution and economic growth in the host country. The view was shared by Amin (1974) whose study noted that if the economy is in the hands of foreigners, it grows in a disarticulated fashion, miss an opportunity to grow organically and cannot therefore survive periods of global economic instability. Also in support of the dependency theory is Bornschier and Chase-Dunn (1985) whose study revealed that FDI result in failure to maximally use the productive resources of the economy because it builds a monopolistic industrial structure. In line with the dependency theory, Santarelli and Figini (2004) observed that FDI accelerated poverty levels in developing countries.

Recent empirical literature which found out that FDI inflow reduced poverty were done by Ucal (2014), Uttama (2015), Shamim et al (2014), Soumare (2015) and Bharadwaj (2014), among others. On the other hand, Huang et al (2010) and Ali et al (2010) observed that poverty increased due to higher levels of FDI inflows into the host countries. In summary, majority of empirical literature is of the opinion that both trade openness and FDI inflow into the host country have a significant positive impact on poverty alleviation. It therefore makes sense that an economy characterised by high levels of trade openness and FDI receipts is more likely to experience increased poverty reduction.

4. Trade Openness, FDI and Poverty Trends in European, Latin American and Asian Emerging Markets

In Argentina, exports and imports (% of GDP) went up from 18.13% in 1994 to 21.38% in 1999, further increased by 15.59 percentage points, from 21.38% in 1999 to 36.97% in 2004, declined by 6.79 percentage between 2004 and 2009 before marginally further going down from 30.18% in 2009 to 29.28% in 2014 (see Figure 1). For Brazil, exports and imports (% of GDP) increased from 19.33% in 1994 to 20.98% in 1999, further went up by 8.70 percentage points during the subsequent five –year period (1999-2004), declined from 29.68% in 2004 to 22.11% in 2009 before experiencing a positive growth of 3 percentage points during the period from 2009 to 2014. Trade openness for Poland consistently followed an upward trend during the period from 1994 to 2014. It went by 13.06, 17.36, 4.09 and 17.70 percentage points during the five year-year periods 1994-1999, 1999-2004, 2004-2009 and 2009-2014 respectively. As for Indonesia, exports and imports (% of GDP) went up by 11.07 percentage points, from 51.88% in 1994 to 62.94% in 1999, plummeted by 3.18 percentage points during the subsequent five-year period before further going down by 14.25 percentage points, from 59.76% in 2004 to 45.51% in 2009. It then experienced a positive growth of 2.69 percentage points, from 45.51% in 2009 to 48.20% in 2014. The trade openness trend for Russia was similar to the trade openness trend for Indonesia during the time period ranging from 1994 to 2014. On the other hand, exports and imports as a ratio of GDP for Peru was consistently upward during the first five-year periods, 1994-1999 (+3.69 percentage points), 1999-2004(+7.64 percentage points) and 2004-2009 (+5.39 percentage points). Exports and imports (% of GDP) then marginally went down by 0.10 percentage points, from 46.42% in 2009 to 46.32% in 2014.

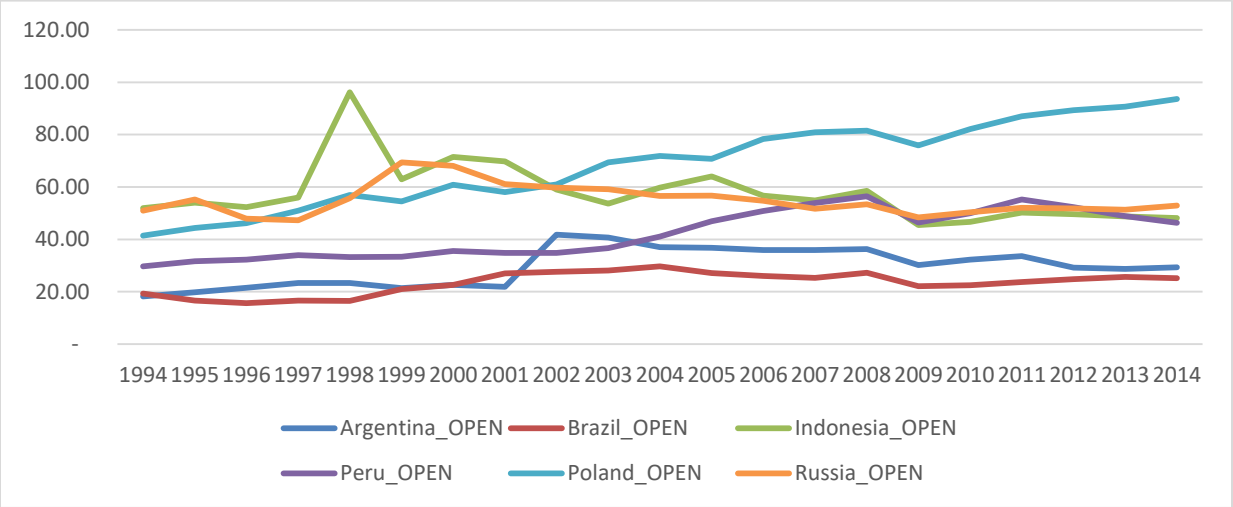

Figure 1. Trade openness as a ratio of GDP trends in selected emerging markets

Source: World Bank (2016)

The net FDI inflow (% of GDP) for the European, Latin American and Asian emerging markets followed a mixed trend (see Figure 2). For example, Argentina's net FDI inflow as a ratio of GDP went up from 1.41% in 1994 to 8.46% in 1999, declined by 6.19 percentage points during the subsequent five-year period before further going down from 2.27% in 2004 to 1.07% in 2009. Net FDI inflow for Argentina then marginally went up by 0.06 percentage points, from 1.07% in 2009 to 1.13% in 2014. Brazil's net FDI inflow as a ratio of GDP mimicked the similar trend to that of Argentina during the period from 1994 to 2014. For Indonesia, net FDI inflow declined from 1.19% in 1994 to 1.01% in 1999 before further going down by 0.27 percentage points during the subsequent five-year (1999-2004) period. Net FDI inflow for Indonesia then experienced a positive growth from 0.74% in 2004 to 0.90% in 2009 and again went up by 2.06 percentage points, from 0.90% in 2009 to 2.97% in 2014.

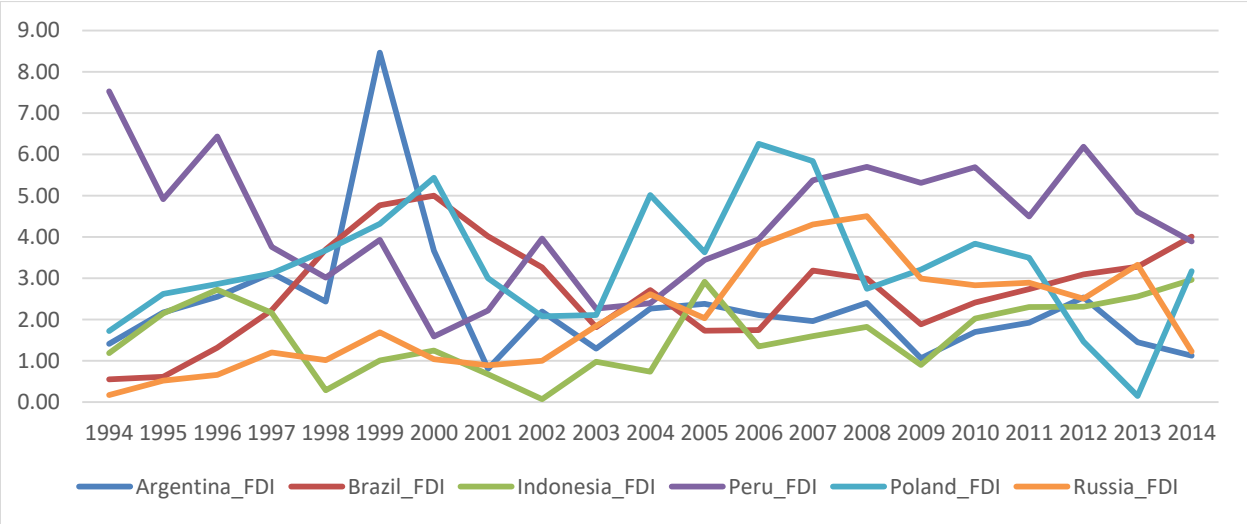

Figure 2. Net FDI inflow (% of GDP) trends for selected emerging markets

Source: World Bank (2016)

On the other hand, Peru's net FDI inflow as a ratio of GDP decreased from 7.53% in 1994 to 3.93% in 1999, declined again by 1.53 percentage points during the five-year period from 1999 to 2004, went up by 2.91 percentage points during the subsequent five-year (2004-2009) period before experiencing a decline of 1.41 percentage points, from 5.31% in 2009 to 3.89% in 2014. Poland experienced a successive positive growth in net FDI inflow (% of GDP) during the first two five-year periods (1994-1999; 1999-2004). Net FDI inflow (% of GDP) for Poland then went down from 5.02% in 2004 to 3.21% in 2009 before further declining by a marginal 0.04 percentage points, from 3.21% in 2009 to 3.17% in 2014. As for Russia, net FDI inflow as a ratio of GDP recorded three five-year successive positive growths during the period from 1994 to 2009 before experiencing a negative growth of 1.76 percentage points, from 2.99% in 2009 to 1.23% in 2014.

Figure 3 clearly shows that the poverty headcount ratio at US3.10 a day (% of population) generally followed a downward trend for all the European, Latin American and Asian emerging markets studied. This means that the number of people in the poverty trap zone as espoused by this proxy went down during the period from 1994 to 2014.

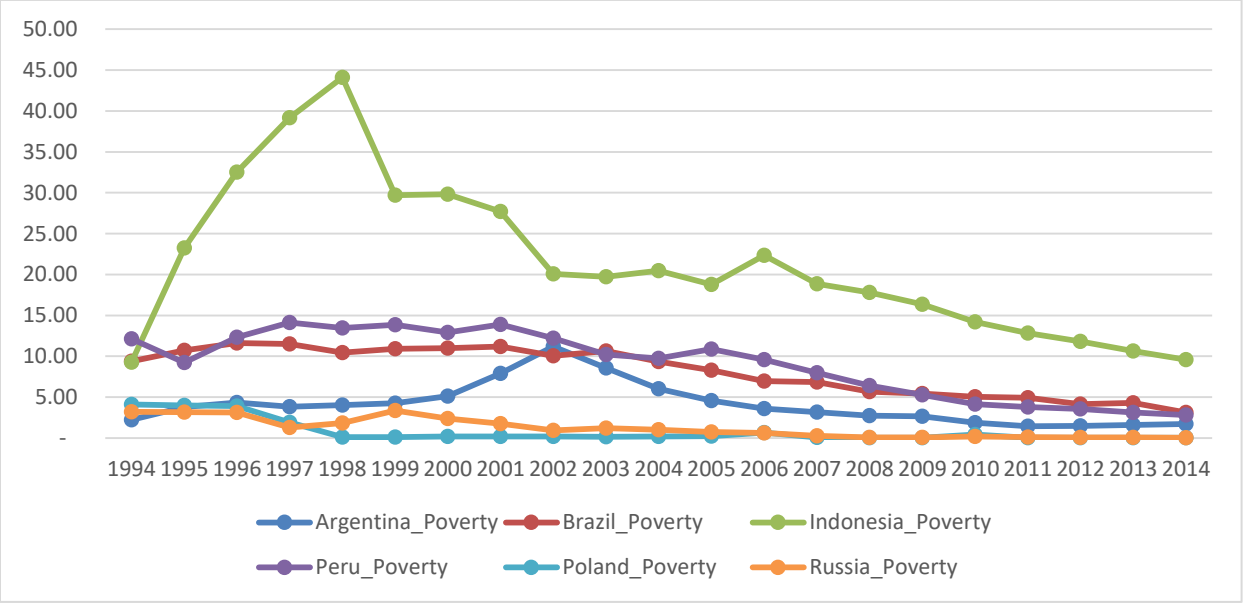

Figure 3. Poverty trends in selected emerging markets

Source: World Bank (2016)

5. Research Methodology

The current study investigated the complementarity and or substitutability between trade openness and FDI in alleviating poverty in the European, Latin American and Asian emerging markets (Argentina, Brazil, Indonesia, Peru, Poland and Russia) using panel data analysis methods with data ranging from 1994 to 2014. Secondary data for the dependent (poverty), explanatory (trade openness and FDI) and control variables (education expenditure, infrastructural development, inflation, human capital

development and international personal remittances) were obtained from World Bank Indicators, International Monetary Fund, Global Financial Indicators, United Nations Development Programme reports, International Financial Statistics databases.

General model specification of the poverty function: Consistent with literature, the most common factors that influence poverty have been summarized in the form of equation 1. They include trade openness (OPEN), foreign direct investment (FDI), education expenditure (EDUC), infrastructural development (INFR), inflation (INFL), human capital development (HCD) and international personal remittances (REMIT).

POVERTY=f (OPEN, FDI, EDUC, INFR, INFL, HCD, REMIT). [1]

Where POVERTY, OPEN, FDI, EDUC, INFR, INFL, HCD and REMIT are respectively proxied by poverty headcount ratio at US$3.10 a day (% of population), total exports and imports (% of DP), net FDI (% of DP), total government expenditure on education (% of GDP), electric power consumption (% of GDP), inflation consumer prices (annual %), human capital development index and international personal remittances received (% of GDP). The choice of the explanatory variables that impact on poverty is in line with previous similar empirical literature. (Knight et al., 2010; Tilak, 2002; Ogundele et al., 2012; Song, 2012)

In summary, literature also shows that trade openness (Goff & Singh, 2014; Goldberg & Pavenik, 2003), foreign direct investment (Calvo & Sanchez-Robles, 2002; Amin, 1974), education (Bagwasi, 2006; Zhang, 2014), infrastructural development (Jahan & McCleery, 2005; Pradhan & Mahesh, 2014), inflation (Shahidur, 2012), human capital development (Chaudhry & Rahman, 2009; Afzal et al., 2010), international personal remittances (Cattaneo, 2005; Anyanwu & Erhijakpor, 2010) can either have a positive or a negative impact on poverty.

Pre-estimation diagnostics

Table 2. Correlation results

	POVERTY	OPEN	FDI	HCD	REMIT	INFL	EDUC	INFR
POVERTY	1.0000							
OPEN	0.0235	1.0000						
FDI	-0.2241**	-0.0536	1.0000					
HCD	-0.6773***	0.0021	0.1098	1.0000				
REMIT	0.0591	0.5663***	0.3391***	-0.0957	1.0000			
INFL	0.0189	-0.1130	-0.1715*	0.0199	-0.0560	1.0000		
EDUC	-0.5804***	-0.1495*	0.1112	0.5149***	-0.1804**	0.0027	1.0000	
INFR	-0.6834***	0.2738***	0.0790	0.4886***	0.2160*	-0.0041	0.3285***	1.0000

Source: Author compilation from E-Views

Note: ***/**/* denotes statistical significance at the 1%/5%/10% level respectively.

FDI, human capital development, education and infrastructure development were individually and separately negatively and significantly correlated with poverty levels. The finding resonates with most theoretical and empirical predictions which argued that FDI, human capital development, education and infrastructure development reduced poverty levels. Inflation was positively but non significantly correlated with poverty levels, a finding that is consistent with most available literature. Although not supported by the majority, the positive correlation between (1) trade openness and poverty levels and (2)

international personal remittances and poverty levels is consistent with literature. The correlation between poverty levels and human capital development is the highest, which is sufficient evidence that there is no multi-collinearity problem between and among all the variables studied, following Stead (1996).

Table 3. Results of descriptive statistics

	POVERTY	OPEN	FDI	HCD	REMIT	INFL	EDUC	INFR
Mean	7.47	46.06	2.73	0.77	0.74	29.94	3.84	2 479
Median	4.30	48.06	2.48	0.78	0.50	6.62	3.81	2 094
Maximum	44.09	96.19	8.46	0.88	2.46	2 076	6.27	7 284
Minimum	0.02	15.6	0.07	0.60	0.02	0.11	1.00	240.02
Range	44.07	80.59	8.39	0.28	2.44	2 075	5.27	7 044
Standard. deviation	8.31	18.7	1.59	0.06	0.63	186.7	1.15	1 812
Skewness	1.86	0.45	0.88	-0.33	0.87	10.59	-0.10	0.80
Kurtosis	7.14	2.74	3.89	2.52	2.68	116.22	2.52	2.74
Jarque-Bera	163	4.68	20.48	3.42	16.47	6 969	1.41	13.96
Probability	0.00	0.10	0.00	0.18	0.00	0.00	0.49	0.00
Observations	126	126	126	126	126	126	126	126

Source: Author compilation from E-Views

The range and standard deviation (greater than 100) shows that outliers and abnormal values exist in the inflation and infrastructural development data for the European, Latin American and Asian emerging markets studied. Data for poverty, FDI, remittances, inflation and infrastructural development is not normally distributed as evidenced by the corresponding Jarque-Bera criteria's probabilities which took the values of zero. The author converted all the data sets into natural logarithms in order to do away with such data characteristics which can negatively affect the final quality of results and therefore could if not addressed lead to misleading conclusions.

Research Methodology, Analysis, Interpretation and Results Discussion: Not all variables were found to be stationary at level (see Table 4) and this necessitated further unit root testing at first difference. Overwhelmingly, all the data sets were found to be stationary at first difference thus paving way for investigating whether there is a long run relationship between and among the variables (co-integration).

Table 4. Panel root tests – Trend and individual intercept

	Level				First difference			
	LLC	IPS	ADF	PP	LLC	IPS	ADF	PP
LPOVERTY	-2.41***	-1.55*	19.45*	30.11***	-1.71**	-3.29***	30.99***	83.128***
LOPEN	-0.61	0.49	8.04	10.04	-4.47***	-4.28	39.39***	74.52***
LFDI	-1.73**	-0.80	16.23	27.66	-1.85**	-4.12***	38.63***	90.43***
LHCD	-5.69***	-3.64***	33.67***	50.70***	-7.83***	-7.12***	63.08***	134.26***
LREMIT	0.77	1.92	3.60	6.35	-3.45***	-2.29**	23.71**	55.73***
LINFL	-2.64***	-3.67***	36.06***	69.44***	-6.01***	-6.77***	60.63***	110.34***
LEDUC	-2.22**	-2.29**	28.65***	23.06**	-8.29***	-5.46***	46.15***	56.62***
LINFR	0.42	0.08	0.89	0.92	-2.76**	-4.29*	16.21*	25.93**

Source: Author's compilation from E-Views

Note: LLC, IPS, ADF and PP stands for Levin, Lin and Chu; Im, Pesaran and Shin; ADF Fisher Chi Square and PP Fisher Chi Square tests respectively. *, ** and *** denote 1%, 5% and 10% levels of significance, respectively.

The author then proceeded to test whether trade openness and FDI complemented or substituted each other in the poverty alleviation function in the case of selected European, Latin American and Asian

emerging markets. Following Sghaier and Abida (2013, p. 6), *e*quation 2 in econometrics terms represented a framework which was used to address the major objective of the current study.

$$POVERTY_{it} = \beta_0 + \beta_1 OPEN_{\text{it}} + \beta_2 FDI_{\text{it}} + \beta_3 (OPEN_{\text{it}} . FDI_{\text{it}}) + \beta_4 X_{\text{it}} + \mu_i + \varepsilon it \quad [2]$$

εit stands for the error term whereas β_0 is the intercept term. μ_i is the time invariant and unobserved country specific effect whilst X_{it} is the vector of explanatory variables and t and i are the subscripts respectively representing time and country.

If the coefficient of the interaction term β_3 is either (1) negative and significant or (2) negative but non-significant, it means that trade openness and FDI complemented each other in reducing poverty levels. The hypotheses of the current study appear as follows:

Hypothesis 1.

Null hypothesis: Trade openness and FDI complement each other in reducing poverty.

Alternative hypothesis: Trade openness and FDI does not complement each other in reducing poverty.

Hypothesis 2.

Null hypothesis: Trade openness and FDI substitute each other in reducing poverty.

Alternative hypothesis: Trade openness and FDI does not substitute each other in reducing poverty.

Pooled OLS and fixed effects approaches were then used to estimate equation 2 –see results in Table 6.

Table 6. Panel regression results

Variable	Dependent: Poverty(Poverty headcount ratio at US$3.10 a day (% of population)			
	Fixed effects		**Pooled OLS**	
	Co-efficient	t-statistic	Co-efficient	t-statistic
OPEN	-0.7970	-1.6390	-1.5719***	-4.8280
FDI	0.9989	1.1201	1.0148	1.0591
OPEN.FDI	-0.2850	-1.1642	-0.2896	-1.1957
HCD	-0.2831	-1.1480	-1.3625	-0.9716
REMIT	0.2515	1.3141	0.0059	0.0530
INFL	0.2399***	3.0561	0.2714***	3.5007
EDUC	-0.3628	-0.7431	-0.5536*	-1.6682
INFR	-1.5147**	-2.5788	-1.3726***	-8.5245
	R-squared 0.8190		R-squared 0.7900	
	Adjusted R-squared 0.7980		Adjusted R-squared 0.7756	
	F-statistic 38.98		F-statistic 55.02	
	Prob(F-statistic) 0.00		Prob (F-statistic) 0.00	

Source: Author's compilation from E-Views

***, ** and * denote 1%, 5% and 10% levels of significance, respectively

According to fixed effects approach, a 1% increase in trade openness resulted in 79.70% decline in poverty levels although this finding was not significant. The pooled OLS approach shows that a 1% increase in trade openness led to a 157.19% decrease in poverty levels. The finding is significant at 1% level. These results are consistent with Pradhan and Mahesh (2014) whose study argued that trade

openness allow more domestic firms to cheaply and easily buy manufacturing inputs from other countries, expand operations, create better paying jobs which leaves the people with more disposable income. Both fixed effects and pooled OLS noted that FDI increased poverty levels, in line with the dependency theory, supported by Bornschier and Chase-Dunn (1985) which argued that FDI creates an industrial structure which is predominantly monopolistic thereby failing to effective utilise the available productive resources which leads to economic growth slowdown. The finding also resonates with empirical studies such as Santarelli and Figini (2004) whose study noted that FDI increased the poverty levels in developing countries.

The interaction term according to both fixed effects and pooled OLS shows that the interaction between trade openness and FDI decreased the rate of poverty reduction in the selected European, Latin American and Asian emerging markets. In other words, the positive impact of trade openness on poverty reduction far much outweighed the deleterious effect of FDI on poverty reduction. It is clear that trade openness and FDI are neither compliments nor substitutes in poverty alleviation efforts in selected European, Latin American and Asian emerging markets. Consistent with Chaudhry and Rahman (2009) whose study argued that increased human capital development imparts skills that increase one's probability of securing a better paying job, Table 6 shows that human capital development negatively but non-significantly influenced poverty levels under both fixed and pooled OLS frameworks. A 1% positive growth in human capital development resulted in a decline in poverty levels by 28.31% under the fixed effects approach whereas a 1% increase in human capital development led to a 136.25% decline in poverty levels under the polled OLS approach.

In contradiction to most literature, international personal remittances had a positive but non-significant impact on poverty levels in selected European, Latin American and Asian emerging markets. In other words, international personal remittances led to an increase in poverty levels, although the results are not significant. The possible explanation is that most of these international personal remittances are channelled towards consumption expenditure at the expense of investment. Inflation was found to have had an increasing effect (positive and significant) on poverty levels in selected European, Latin American and Asian emerging markets under both fixed effects and pooled OLS, in line with Shahidur (2012) whose study argued that higher levels of inflation plunge the people deeper into poverty by wiping out the value of their financial assets investments. Education and infrastructural development were both found to have had a negative but non-significant impact on poverty levels under the fixed effects approach. The two variables were also found to have had a negative but significant influence on poverty levels. The findings mean that higher levels of investment in education and infrastructural development resulted in poverty alleviation in selected European, Latin American and Asian emerging markets, consistent with most theoretical and empirical predictions.

6. Conclusion, Policy Implications and Possible Future Research

This paper investigated whether trade openness and FDI complement or substitute each other in alleviating poverty in selected European, Latin American and Asian emerging markets using panel data analysis approaches with data ranging from 1994 to 2014. The study found out that trade openness and FDI neither complimented nor substituted each other in the process of alleviating poverty levels in

selected European, Latin American and Asian emerging markets. The implication of the study is that emerging markets studied should increases levels of trade openness in order to accelerate poverty reduction efforts. They should also make sure that they do not over rely on FDI as a source of capital for their economic activities and poverty reduction efforts as that easily achieve the opposite unintended outcome. As per expectation, control variables such as human capital development, education and infrastructural development were found to have had a poverty reduction effect whilst inflation increased the poverty levels. Emerging markets studied should therefore increase their investment towards human capital development, education and infrastructural development in order to reduce poverty levels. However, FDI and international personal remittances increased poverty levels in selected European, Latin American and Asian emerging markets, a finding that is against majority of literature. The possible explanation is that there are certain pre-conditions that must exist before FDI and international personal remittances can help in alleviating poverty. Future studies should therefore investigate the preconditions that should be available in the host and remittance receiving countries before they benefit from FDI and remittances induced poverty reduction.

7. Bibliography

Afzal, M. Malik; Begum, M.E.; Sarwar, I. K. & Fatima, H. (2010). Relationship among education, poverty and economic growth in Pakistan: An Econometric analysis. *Journal of Elementary Education*, Vol. 22, No. 1, pp. 23-45.

Amin, S. (1974). *Accumulation on a world scale: A critique of the theory of underdevelopment.* New York: Monthly Review Press.

Ali, M.; Nishat, M. & Anwar, T. (2010). Do foreign inflows benefit Pakistan poor? *The Pakistan Development Review*, Vol. 48, No. 4, pp. 715-738.

Anyanwu, J.C. & Erhijakpor, A.E.O. (2010). Do international remittances affect poverty in Africa? *African Development Review*, Vol. 22, No. 1, pp. 51-91.

Avelino, G.; Brown, D.S. & Hunter, W. (2005). The effects of capital mobility, trade openness and democracy on social spending in Latin America, 1980-1999. *American Journal of Political Science*, Vol. 49, No. 3, pp. 625-641.

Bagwasi, M. (2006). The role of language in adult education and poverty reduction in Botswana. *Review of Education*, Vol. 52, No. 3-4, pp. 333-341.

Balassa, B. (1978). Exports and economic growth: further evidence. *Journal of development economics*, Vol. 5, No. 2, pp. 181-189.

Bhagwati, J. & Srinivasan, T.N. (2002). Trade and poverty in the poor countries. *The American Economic Review*, Vol. 92, No. 2, pp. 180-183.

Bharadwaj, A. (2014). Reviving the globalization and poverty debate: Effects of real and financial integration on the developing world. *Advances in Economics and Business*, Vol. 2, No. 1, pp. 42-57.

Bornschier, V. & Chase-Dunn, C. (1985). *Transnational corporations and underdevelopment*. New York: Praeger.

Calvo, M.B. & Sanchez-Robles, B. (2002). Foreign direct investment, Economic freedom and Economic growth: New evidence from Latin America. Universidad de Cartabria, *Economics Working*, Paper No. 4/03.

Cattaneo, C. (2005). International migration and poverty: A cross country analysis. Centro Studi Luca d'Agliano, Torino. www.dagliano.unimi.it/media/Cattaneo_Cristina.

Cavusgil, S.T.; Ghauri, P.N. & Akcal, A.A. (2013). *Doing business in emerging markets*. Sage Publications. 2nd Edition.

Chaudhry, I.S. & Rahman, S. (2009). The impact of gender inequality in education on rural poverty in Pakistan: An empirical analysis. *European Journal of Economics, Finance and Administrative Sciences*, Vol. 15, pp. 174-188.

Chenery, H.B. & Strout, A.M. (1966). Foreign assistance and economic development. *The American Economic Review*, Vol. 56, No. 4, pp. 679-733.

Daumal, M. (2013). The impact of trade openness on regional inequality: The cases of India and Brazil. *The International Trade Journal*, Vol. 27, No. 3, pp. 243-280.

Dollar, D. & Kraay, A. (2004). Trade, growth and poverty. *The Economic Journal*, Vol. 114, No. 493, pp. 22-49.

Goff, M.L. & Singh, R.J. (2014). Does trade reduce poverty? A review from Africa. *Journal of African Trade*, Vol. 1, No. 1, pp. 5-14.

Goldberg, P. & Pavenik, N. (2003). The response of the informal sector to trade liberalization. *Journal of Developing Economy*, Vol. 72, No. 2, pp. 463-496.

Gourdon, J.; Maystre, N. & Melo, J. (2008). Openness, inequality and poverty: Endowments matter. *The Journal of International Trade and Economic Development*, Vol. 17, No. 3, pp. 343-378.

Hart, O. (1983). The market mechanism as an incentive scheme. *Bell Journal of Economics*, Vol. 14, No. 2, pp. 366-382.

Huang, C.; Teng, K. & Tsai, P. (2010). Inward and outward foreign direct investment and poverty reduction: East Asia versus Latin America. *Review of World Economics*, Vol. 146, No. 4, pp. 763-779.

Im, K.S.; Pesaran, M.H. & Shin, Y. (2003). Testing unit roots in heterogeneous panels. *Journal of Econometrics*, Vol. 115, No. 1, pp. 53-74.

Jahan, S. & McCleery, R. (2005). *Making infrastructure work for the poor: Synthesis report of four country studies Bangladesh, Senegal, Thailand and Zambia.* New York: UNDP.

Jenkins, R. (2004). Vietnam in the global economy: Trade, employment and poverty. *Journal of International Development*, Vol. 16, No.1, pp. 13-28.

Knight, J.; Shi, L. & Quheng, D. (2010). Education and the poverty trap in rural China: Closing the trap. *Oxford Development Studies*, Vol. 38, No. 1, pp. 1-24.

Kumar, N. & Pradhan, J.P. (2002). FDI, externalities and economic growth in developing countries: Some empirical explorations and implications for WTO negotiations on investment. *RIS Discussion*, Paper No. 27/2002. New Delhi, India.

Lee, E. & Vivarelli, M. (2006). The social impact of globalization in the developing countries. *International Labour Review*, Vol. 145, No. 3, pp. 167-184.

Levin, A.; Lin, C.F. & Chu, C.S.J. (2002). Unit root tests in panel data: Asymptotic and finite-sample properties. *Journal of Econometrics*, Vol. 108, No. 1, pp. 1-24.

Montalbano, P. (2011). Trade openness and developing countries' vulnerability: Concepts, misconceptions and directions for research. *World Development*, Vol. 39, No. 9, pp. 1489-1502.

Nath, H. (2005). Trade, Foreign direct investment and growth: Evidence from transition economies. *SHSU Economics and International Business*, Working Paper No. SHSU-Eco-WP05-04. Huntsville, TX: Sam Houston State University.

Neumayer, E. & Soysa, I.D. (2005). Trade openness, foreign direct investment and child labour. *World Development*, Vol. 33, No. 1, pp. 43-63.

Ogundele, O.J.K.; Akingbade, W.A. & Akinlabi, H.B. (2012). Entrepreneurship training and education as strategy tools for poverty alleviation in Nigeria'. *American International Journal of Contemporary Research*, Vol. 2, No. 1, pp. 148-156.

Pradhan, B.K. & Mahesh, M. (2014). Impact of trade openness on poverty: A panel data analysis of a set of developing countries. *Economic Bulletin*, Vol. 34, No. 4, pp. 2208-2219.

Ravallion, M. (2003). The debate on globalization, poverty and inequality: Why measurement matter. *International Affairs*, Vol. 79, No. 4, pp. 739-753.

Ravallion, M. (2006). Looking beyond averages in the trade and poverty debate. *World Development*, Vol. 34, No. 8, pp. 1374-1392.

Rivas, M.G. (2007). The effects of trade openness on regional inequality in Mexico. *Ann Reg Sci*, Vol. 41, No. 3, pp. 545-561.

Santarelli, E. & Figini, P. (2004). *Does globalization reduce poverty? Some empirical evidence for the developing countries*? In Lee & Vivarelli, pp. 247-303.

Sghaier, I.M. & Abida, Z. (2013). Foreign direct investment, financial development and economic growth: Empirical evidence from North African countries. *Journal of International and Global Economic Studies*, Vol. 6, No. 1, pp. 1-13.

Shahidur, S.T (2012). The effect of inflation on poverty in developing countries: A panel data analysis. *Master of Arts Dissertation with Texas Tech University*. Unpublished, pp. 1-56.

Shamim, A.; Azeem, P. & Naqvi, M.A. (2014). Impact of foreign direct investment on poverty reduction in Pakistan. *International Journal of Academic Research in Business and Social Sciences*, Vol. 4, No. 10, pp. 465-490.

Slddiqui, R. & Kemal, A.R. (2006). Remittances, trade liberalization and poverty in Pakistan: The role of excluded variables in poverty change analysis. *The Pakistan Development Review*, Vol. 45, No. 3, pp. 383-415.

Song, Y. (2012). Poverty reduction in China: The contribution of popularizing primary education. *China and World Economy*, Vol. 20, No. 1, pp. 105-122.

Soumare, I. (2015). *Does foreign direct investment improve welfare in North Africa?* Africa Development Bank.

Stead, R. (1996). *Foundation quantitative methods for business.* Prentice Hall. England.

Tilak, J.B.G. (2002). Education and poverty. *Journal of Human Development*, Vol. 3, No. 2, pp. 191-207.

Tsai, P. & Huang, C. (2007). Openness, growth and poverty: The case of Taiwan. *World Development*, Vol. 35, No. 11, pp. 1858-1871.

Ucal, M.S. (2014). Panel data analysis of foreign direct investment and poverty from the perspective of developing countries. *Procedia-Social and Behavioral Sciences*, Vol. 109, No. 8, pp. 1101-1105.

UNCTAD (2012). *World Investment Report*. New York: United Nations.

Uttama, N.P. (2015). Foreign direct investment and poverty reduction nexus in South East Asia, [in:] Silber J.. Poverty Reduction Policies and Practices in Developing Asia.

Winters, L.A.; McCulloch, N. & McKay, A. (2002). Trade liberalization and poverty: The empirical evidence: CREDIT Research Paper, No. 02/22.

Winters, A.; McCulloch, N. & McKay, A. (2004). Trade liberalization and poverty: the evidence so far. *Journal of Economic Literature*, Vol. 42, No. 1, pp. 72-115.

World Bank (2016). World Development Indicators published by the World Bank, Washington D.C.

Zhang, H. (2014). The poverty trap of education: Education-poverty connections in Western China. *International Journal of Educational Development*, Vol. 38, No. September, pp. 47-58.