

# GLOBAL FINANCIAL CRISIS AND RESTRUCTURING OF GLOBAL ECONOMY – EVIDENCE FROM GLOBAL FDI INFLOWS, OUTFLOWS AND NETFLOWS

*Dr. Navitha Thimmaiah*

Assistant Professor, D.o.S in Economics and Cooperation, University of Mysore

---

## **Abstract:**

The present paper is an attempt to analyze the impact of recent global slow down on the restructuring of the global economy. It tries to provide empirical basis for the same through examining important international macroeconomic variables like FDI Inflows, FDI Outflows, FDI Net flows etc. Regression, Correlation and Granger Causality tests have been employed for recognizing trends and relationships. The results indicate that the developing region of the world is improving their economic status in international arena in terms of GDP growth rates, FDI inflows and outflows.

---

**Key Words:** Global crisis, global FDI inflows, outflows and netflows

The present Global Financial Crisis (GFC) started to appear in mid-2007. When the US economy witnessed a decline in real GDP for more than four months everyone suspected an ensuing slowdown. Officially the bubble got burst with the failure of Lehman Brothers, the leading financial institution in United States of America. Though economic fluctuations follow different trends, the present recession is regarded as a black swan because of it being a low probability event, an outlier, outside realm of reasonable expectations and carrying an extreme impact. We already know since the experience of Great Depression of 1930s how drastic the effects of such a crisis can be. One of the major impacts of the recent slowdown has been the restructuring of the global economy in different aspects.

## **Objectives set for the present paper are:**

1. To highlight the causes and consequences of the present GFC with a special focus on restructuring of global economy.
2. To focus and empirically analyse gradual shifts in global economy in terms of FDI Inflows and Outflows.

## **Methodology**

The paper has employed both descriptive and analytical approach. Towards first objective it overviews existing literature and summarizes the main findings, focusing particularly on some topics which deemed important. For empirical analysis Regression, Correlation and Granger Causality tests have been employed identifying significant trends and relationships.

Coming to the causes of the present GFC, the most important one has been the collapse of US Sub-Prime mortgage market because of reversal of the housing boom. Shorters<sup>1</sup> were the ones blamed for forcing down the market value of Banking Group HBOS. The underlying factor for both of these has been weak regulation of financial sector. Joseph Stiglitz points that American financial system failed in its two crucial responsibilities of managing risk and allocating capital. In other words financial crisis emerged from an over-supply of financial innovation and an under-supply of financial regulation within the core advanced economies<sup>2</sup>. Other causes have been soaring commodity prices, increasingly restrictive monetary policies in a number of countries, and stock market volatility<sup>3</sup>.

Today's world being more of a global village with greater integration, the effects of crisis in one big country gets rippled and most of the countries are affected in one way or other. The most important consequences have been

- **Collapse of world's largest financial institutions resulting in the fall of stock markets**
- **The credit crisis and high cost of borrowing led to many a job cuts across different countries and sectors.**

- **Fall in consumption levels which in Keynesian terms is dearth of aggregate effective demand affected the whole economy.**

If these were the immediate effects in the developed countries the developing countries are facing a different set of problems altogether.

- **Soaring food prices, fuel prices and prices of other commodities. This drastically affects those developing countries which depend on goods for their import and export.**
- **Because of Uncertainty and instability in international financial currency and commodity markets coupled with doubts about the monetary policy to be pursued by developed nations, many developing nations became uncertain about the policy they themselves have to pursue.**
- **With fewer funds available for development, the GFC has become a crisis of poverty for humanity. The social protection commitments have received a setback<sup>4</sup>.**
- **There has been evidence of negative or slow growth rates and negative effects on important sectors like agriculture, manufacturing<sup>5</sup>, energy<sup>6</sup>, insurance<sup>7</sup> etc.**

The magnitude of the effects of GFC or recession calls for the coping strategies both at macro and micro levels. At macro level it is global and national strategies and at micro it is strategies followed by individual enterprises. One of the themes of this seminar being managing recession in global context I limit to macro strategies. The immediate strategy thought out in countries drastically affected by GFC was bail-out and rescue packages\*. The Keynesian thought which had been left out in way back 1970s again entered the minds of policy makers as a remedy to the present GFC. Apart from bail-outs other remedial measures considered by nations were

- **To stop market manipulations like shorting.**
- **Nationalization of Banks in some European countries.**
- **The most important one has been to stimulate economy through reduced interest rates, reduce taxes, support borrowing activities, increased spending on public works etc which is based on Keynesian ideas.**

The strategies thought of at global level include:

- **Restructuring and strict supervision of International Financial System including reforming of Bretton Woods Institutions (BWIs). “One size fits all” attitude of these institutions should be done away with.**

As John Vandaele Journalist puts it - The most powerful international institutions tend to have the worst democratic credentials: the power distribution among countries is more unequal, and the transparency, and hence democratic control, is worse.

- **Increasing capital and liquidity requirements at financial institutions.**
- **The introduction of a country bankruptcy code that will enable orderly sovereign debt restructuring.**
- **Not just expanding the capital adequacy requirement, but also making it counter-cyclical, rather than pro-cyclical as it currently is (i.e. making credit a bit harder to get during good times).**
- **Stricter regulations of tax havens and private equity funds, which have greatly contributed to increasing opacity in the financial market.**
- **Credit rating agencies play a critical role in today’s financial system and given the damages they have inflicted by blessing all those toxic assets, these agencies need to be much more heavily regulated or even replaced by an international public body<sup>8</sup>.**
- **Crackdown on international tax havens to address harmful tax competition between states<sup>9</sup>. So that some tax revenue is generated within states.**
- **Better representation of developing countries at international financial institutions. Like G20 instead of G8\*. (But 3% of votes will not do).**

In fact Joseph Stiglitz talks about BW II which works both in emerging and capitalist economies. China has been voicing concerns over having alternative to US dollar at international level. All this indicates that the present crisis might have provided an opportunity for power shift which of course will be opposed by the powerful ones. Harvard professor of economics, Stephen Marglin says that GFC has provided an opportunity of Rethinking Economics away from the neo-

liberal economic ideas. The gaining importance of the developing world in global arena can be clearly observed in terms of FDI inflows, FDI outflows and recent GDP growth rates.

After 1980, the restrictions on FDI (Foreign Direct Investment) over the world were dramatically reduced. This was due to host of factors like globalization policies of developing countries, accelerating technological change, emergence of globally integrated production and marketing networks, existence of bilateral investment treaties, prescriptions from multilateral development banks, and positive evidence from developing countries that have opened their doors to FDI. In addition, the drying-up of commercial bank lending due to debt crises brought many developing countries to reform their investment policies to attract foreign capital; in this case FDI appeared to be an attractive alternative to bank loans as a source of capital inflows. In the process, incentives and subsidies were aggressively offered, particularly to multinational companies (MNCs) that supported developing countries industrial policies. This led to a rapid expansion of FDI flows around the world during the last 30 years. From only \$51.5 billion in 1980, FDI outflows reached \$1.2 trillion in 2000 and \$1.9 trillion in 2007 (UNCTAD 2008).

For the sake of empirical analysis the data on world FDI inflows was classified into Developed and developing at first instance and continent wise classification has also been considered. Two Granger causality test were run for both the classifications.

The data covers world and region wise FDI inflows for the period 1980-2007. Data are secondary which have been collected from IMF and UNCTAD. The econometric technique employed for empirical analysis include OLS regressions, ADF test and Granger causality test which are explained in detail in the later stage of the article.

The linear regression models specified for the study are:

$$\text{World FDI}_i = \alpha_i + \beta_1 \text{Developed FDI}_i + \beta_2 \text{Developing FDI}_i + \varepsilon_i \quad (1)$$

$$\text{World FDI}_i = \alpha_i + \beta_1 \text{Africa FDI}_i + \beta_2 \text{Asia FDI}_i + \beta_3 \text{America FDI}_i + \beta_4 \text{Oceania FDI}_i + \beta_5 \text{Europe FDI}_i + \varepsilon_i \quad (2)$$

While  $\varepsilon_i$  represent the “noise” or error term;  $\alpha_i$  and  $\beta_{i,s}$  represent the slope and coefficients of regression.

**Table1.** Regression results of model 1

Variables	Coefficient	Std. Error	t-Statistic	Prob.
C	917.2115	831.0984	1.103614	0.2812
Developed	0.989280	0.003109	318.1702	0.0000
Developing	1.117395	0.051031	21.89620	0.0000
R <sup>2</sup>	0.999527			
Adjusted R <sup>2</sup>	0.999486			
Durbin-Watson	1.947032			

Table1. clearly specifies that the regression coefficients of model 1 are statistically significant indicating that both developed and developing FDI inflows influences the world FDI inflows.

Both the variables influence the world FDI inflows in almost same proportion. The regression equation for model 1 is specified as:

$$\text{World} = 917.21 + 0.98(\text{Developed}) + 1.11(\text{Developing})$$

**Table 2.** Regression results of model 2

Variables	Coefficient	Std. Error	t-Statistic	Prob.
C	193.9316	2089.640	0.092806	0.9270
AFRICA	1.546016	0.545122	2.836093	0.0102
AMERICA	1.097268	0.051086	21.47884	0.0000
ASIA	0.498881	0.146472	3.405977	0.0028
OCEANIA	0.845013	0.109970	7.684035	0.0000
EUROPE	1.026456	0.021023	48.82581	0.0000
R <sup>2</sup>	0.998236			
Adjusted R <sup>2</sup>	0.997796			
Durbin-Watson	2.183856			

The regression coefficients of second model are also statistically significant. That is all the variables have the capacity to explain variations in world FDI inflows. However, influence of Africa, America and Europe is greater when compared to Asia and Oceania. The regression equation for model 2 is specified as:

$$\text{World} = 193.93 + 1.54(\text{Africa}) + 1.09(\text{America}) + 0.49(\text{Asia}) + 0.84(\text{Oceania}) + 1.02(\text{Europe})$$

The Ordinary Least squares regression analysis establishes the dependence of one variable on others; this does not necessarily imply direction of causation between the variables. Kendall and Stuart (1961) noted that “a statistical relationship, however strong and however suggestive, can never establish causal connection”. Therefore, this study employs another popular method, the Granger causality test, used to study the direction of causality between the variables considered.

### Results

**Table 3.** Granger causality results for world, developed and developing FDI inflows

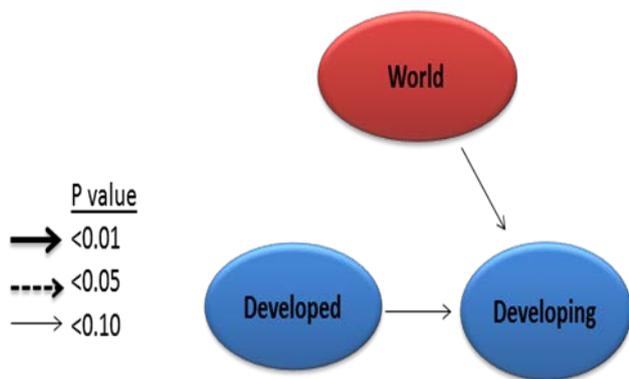
Null Hypothesis:	Obs	F-Statistic	Probability
DEVELOPED2 does not Granger Cause WORLD2	24	0.00489	0.99512
WORLD2 does not Granger Cause DEVELOPED2		0.04861	0.95267
DEVELOPING2 does not Granger Cause WORLD2	24	0.00737	0.99266
<b>WORLD2 does not Granger Cause DEVELOPING2</b>		<b>3.13628</b>	<b>0.06653</b>
DEVELOPING2 does not Granger Cause DEVELOPED2	24	0.04132	0.95961
<b>DEVELOPED2 does not Granger Cause DEVELOPING2</b>		<b>3.12313</b>	<b>0.06719</b>

**Table 3.** Granger causality results for world and other regions

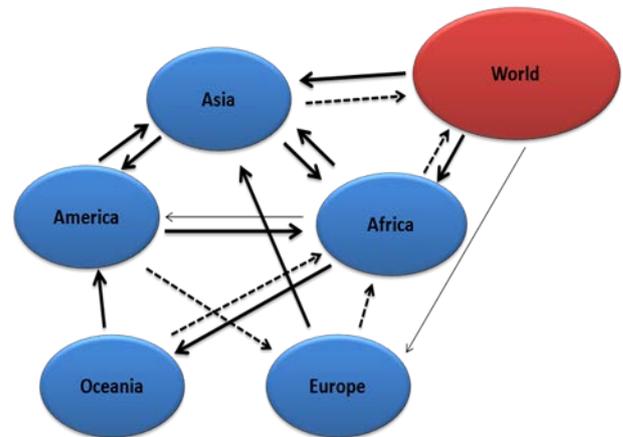
OCEANIA2 does not Granger Cause WORLD2	24	1.37323	0.27731
WORLD2 does not Granger Cause OCEANIA2		1.15779	0.33538
AMERICA2 does not Granger Cause WORLD2	24	0.83537	0.44903
WORLD2 does not Granger Cause AMERICA2		1.03967	0.37283

<b>ASIA2 does not Granger Cause WORLD2</b>	<b>24</b>	<b>4.51468</b>	<b>0.02488</b>
<b>WORLD2 does not Granger Cause ASIA2</b>		<b>10.9264</b>	<b>0.00069</b>
EUROPE2 does not Granger Cause WORLD2	24	0.06894	0.93361
<b>WORLD2 does not Granger Cause EUROPE2</b>		<b>2.86205</b>	<b>0.08194</b>
<b>AFRICA2 does not Granger Cause WORLD2</b>	<b>24</b>	<b>4.54146</b>	<b>0.02443</b>
<b>WORLD2 does not Granger Cause AFRICA2</b>		<b>2.65434</b>	<b>0.09626</b>
AMERICA2 does not Granger Cause OCEANIA2	24	0.87948	0.43123
<b>OCEANIA2 does not Granger Cause AMERICA2</b>		<b>7.22387</b>	<b>0.00464</b>
ASIA2 does not Granger Cause OCEANIA2	24	1.95640	0.16882
OCEANIA2 does not Granger Cause ASIA2		1.52468	0.24316
<b>EUROPE2 does not Granger Cause OCEANIA2</b>	<b>24</b>	<b>2.41369</b>	<b>0.10600</b>
OCEANIA2 does not Granger Cause EUROPE2		0.98660	0.39115
<b>AFRICA2 does not Granger Cause OCEANIA2</b>	<b>24</b>	<b>6.04980</b>	<b>0.00927</b>
<b>OCEANIA2 does not Granger Cause AFRICA2</b>		<b>3.58049</b>	<b>0.04791</b>
<i>ASIA2 does not Granger Cause AMERICA2</i>	<i>24</i>	<i>24.0817</i>	<i>0.00233</i>
<b>AMERICA2 does not Granger Cause ASIA2</b>		<b>6.55462</b>	<b>0.00684</b>
EUROPE2 does not Granger Cause AMERICA2	24	1.56980	0.23391
<b>AMERICA2 does not Granger Cause EUROPE2</b>		<b>5.02507</b>	<b>0.01771</b>
<b>AFRICA2 does not Granger Cause AMERICA2</b>	<b>24</b>	<b>3.06021</b>	<b>0.07045</b>
<b>AMERICA2 does not Granger Cause AFRICA2</b>		<b>8.89318</b>	<b>0.00188</b>
<b>EUROPE2 does not Granger Cause ASIA2</b>	<b>24</b>	<b>10.6681</b>	<b>0.00078</b>
ASIA2 does not Granger Cause EUROPE2		1.20011	0.32299
<b>AFRICA2 does not Granger Cause ASIA2</b>	<b>24</b>	<b>7.16589</b>	<b>0.00480</b>
<b>ASIA2 does not Granger Cause AFRICA2</b>		<b>9.51289</b>	<b>0.00137</b>
AFRICA2 does not Granger Cause EUROPE2	24	0.96675	0.39826
<b>EUROPE2 does not Granger Cause AFRICA2</b>		<b>3.33789</b>	<b>0.05724</b>

**Chart 1** Granger causality relations in the first model



**Chart 2** Granger causality relations in the second model



**Causal relationship of world with other regions:**

It is quite obvious from the chart 1 that both world as well as developed countries FDI inflows is causing developing countries FDI inflows; however developing countries are causing neither world nor developed FDI inflow. On the other side there is no relationship between world and developed FDI inflows.

Chart 2 indicates that world has bidirectional causal relationship with Asia and Africa, whereas it has unidirectional causal relationship with Europe with world causing Europe inflows. Same has been observed in the Granger Causality tests among world, developed and developing regions.

Africa is one of the regions which is sharing bicausal relationships with world as well as three regions namely Asia, America and Oceania. Whereas Europe FDI inflows causes African FDI inflows and not vice versa, indicating unidirectional causal relationship.

In case of Asia the Granger causality test results indicate Asia sharing bicausal relationship with world, Africa and America. Like African case Asia has unidirectional relation with Europe.

America causes Asia, Africa and Europe. Whereas, America is caused by Oceania, Asia and Africa. Thus is clear that America has bidirectional causal relationship with Asia, Africa and unidirectional with Oceania and Europe.

The striking aspect observed in the case of Europe is the fact that it shares unidirectional relationship and no bicausal relations. Europe causes Asia, Africa and gets caused by America and world.

Oceania has relationship with only Africa and America. With Africa it has two way relationships whereas with America it is one way with Oceania causing America.

**Conclusion**

The OLS regression results indicate the significance of developed and developing and also of all the regions in explaining world FDI inflows. The Granger causality test results for the different regions of the world clearly complement the Granger causality test results for world, developed and developing. Where both developed regions and world causes developing region FDI inflows but developing does not causes neither world nor developed.

The most important observation is Asia and Africa indicating similar kind of Granger causality test results. Both Africa and Asia share bicausal relationships among themselves and with world and America. Europe causes both Asia and Africa this can be because of the application of the theories of location as a region, cost-reduction pressures, liberalized investment environment, institutional prerequisites for attracting FDI and cultural proximity for these two regions. The only difference is the absence of causal relationship between Oceania and Asia and presence of bicausal relationship with Oceania and Africa. The similarity of results for African and Asian regions can be attributed to the fact that both are potential market for FDI inflows with presence of vast area and population.

## References:

Shorter is a trader borrows shares from a big City investor who charges a fee for the service. The trader then sells the shares in the hope of buying them back more cheaply when the price falls and returning them to their rightful owner. The difference between the two prices is the profit.

Leonard Seabrooke; Eleni Tsingou, May 2010 “Responding to the Global Credit Crisis: The Politics of Financial Reform”, *British Journal of Politics & International Relations* Vol.: 12, No.: 2, [Page 313-323]

*Kanaga Raja, September 4, 2008, Economic Outlook Gloomy, Risks to South, say UNCTAD, Third World Network.*

Anna McCord, April 2010, “The Impact of the Global Financial Crisis on Social Protection in Developing Countries”, *International Social Security Review* Vol.: 63, No.: 2 [Page 31-45].

Lesley Potter, April 2010, Kalimantan in the Firing Line: A Note on the Effects of the Global Financial Crisis, *Bulletin of Indonesian Economic Studies* Vol.: 46, No.: 1, [Page 99- 109].

Chaoqing Yuan; Sifeng Liu; Naiming Xie Chaoqing Yuan; Sifeng Liu; Naiming Xie, April 2010, The Impact on Chinese Economic Growth and Energy Consumption of the Global Financial Crisis: An input-output Analysis, *Energy* Vol.: 35, No.: 4, [Page 1805-1812].

P Krishna Prasanna, January 2010, Impact of Global Financial Crisis on Insurance Industry, ICAI Reader.

Ha-Joon Chang, Professor of economics at Cambridge.

Nikolas Sarkozy, President of France.

\*Economic Stimulus Act of 2008, American Recovery and Reinvestment Act of 2009, The Public-Private Partnership Investment Program , Emergency Economic Stabilization Act of 2008

The G20 represents the G8, the EU as a bloc and 12 emerging economies: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United Kingdom and the United States of America.

As well as the EU being represented as a bloc, IMF and World Bank representatives are usually present at G20 meetings. Although it is an informal structure, it comprises 90% of the world's economic output and some 80% of the world's population, although the poorest 20% (over 160 nations) are not represented by this group.