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## ROLE OF F.D.I IN MANAGING TURBULENCES OF FINANCIAL MARKET F.D.I & FINANCIAL MARKET IN INDIA & CHINA

**SHEEL KUMAR AWASTHI**

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**Abstract:** This paper inquires about the cyclic correlation between F.D.I and corresponding up and down in financial market and subsequently on the economic condition of a country (India and china) and due to this future prospect of attracting F.D.I

Today every country wants to attract foreign direct investment, but these investments sometimes leads to chaotic conditions in the financial markets due to collective trading and insiders trading, which in turn raises the question for better regulation & liquidity analysis. And for domestic companies it raises the question of sustainability in volatility & better risk management & innovative managerial practices.

My paper analyze mathematically and theoretically the cases of china& India that how they were affected by these turbulences and what they evolved new, from the financial crisis of 2007-2008. Also in this whole crisis how these countries saved their local industry.

**Keywords:** F.D.I ,chaotic financial market conditions, world bank, collective trading, insiders trading, better regulation sustainability, liquidity analysis, risk management , innovative managerial practices, local industry, innovative strategies .

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**Introduction:** After the 1991 economic reforms in India and second stage of economic reforms in china in the late 1990s both countries tried hard to attract foreign direct investment. As their main intent and objectives for foreign direct investment has been supported by various theories, production cycle theory (Vernon, 1966) competitive advantage theory (porter, 1980, 1985). But by the passage of time, these investments raise the question about social implications, economic viability, and financial market sustainability. As these governments' main objective and intent behind increasing the foreign direct investment is to supplement domestic capital, technology and skills, for accelerated economic growth, but the financial crisis triggered on February 27 2007 by federal home loan mortgage corporation announcement, to no longer buy the most risky subprime mortgages and mortgages related securities, created a bubble which further collapsed the financial markets of these countries, which subsequently crush their main objectives and intent of foreign direct investment and later on made hard for these countries to attract foreign direct investment.

Hence my question in this context is:

- ❖ Is war infested U.S and U.K shown active leadership and better financial intervention to avert such crisis?
- ❖ Is India and china framed their policies according to their need or just get Trapped in the strategy of FIIs/FDI companies, foreign portfolio investors, foreign Venture capital investors
- ❖ Is foreign direct investment takes place freely i.e. without much red Tapism
- ❖ What lesson they learnt from this crisis.

For these questions answers may differ for many people's but to me any crisis makes a country to grow more mature as it has been said by supachai panitchpakdi, Secretary-General of UNTACD, at the second session of the trade and development commission, 3 May 2010..... "Moving out of a crisis of such magnitude offers a rare historical chance for change, a momentum for reform, and an opportunity for a new trade agenda adapted to the new realities. As the great economist JK Galbraith famously said, "Yield not to the attack of other ideas, but .... To the massive onslaught of circumstances with which they cannot contend". This is also shown in the new policies framed by India and china.

**Foreign Direct Investment In The View Of India And China:** In India foreign investment is introduced in the year 1991 under foreign exchange management act (FEMA) . Later on it is modified and now it is known as Foreign exchange management act. 1999 , In India there was ambiguity regarding the parameters to define F.D.I & FII , Later on govt. decides to follow international norms, as it was stated by finance minister that government was in consultation with stock market regulator SEBI on a number of issues, Mr. Chidambaram said: "In order to remove the ambiguity that prevails on what is FDI and what is FII, I propose to follow the international practice and lay down a broad principle that, where an investor has a stake of 10 per cent or less in a company, it will be treated as FII and, where an investor has a stake of more than 10 per cent, it will be treated as FDI."

**Source:-** The Hindu 28 Feb edition Chinese definition of foreign direct investment includes all the 12 elements of IMF. The IMF definition of FDI

includes 12 different elements:

- ❖ equity capital,
- ❖ reinvested earnings of foreign companies,
- ❖ inter-company debt transactions
- ❖ short-term and long-term loans
- ❖ financial leasing,
- ❖ trade credits
- ❖ grants
- ❖ bonds
- ❖ non-cash acquisition of equity
- ❖ investment made by foreign venture capital investors
- ❖ earnings data of indirectly-held FDI enterprises, premium and non-competition fee but till now India takes only equity capital as F.D.I
- According to me F.D.I includes (net inflow of investments) –( net outflow of investments), but broadly it is said that F.D.I includes mergers and acquisition , building new facilities and reinvesting profits earned from overseas operations and intra company loans".( "China Edges Out U.S. as Top Foreign-Investment Draw Amid World Decline". Wall Street Journal. 2012-10-23)

**Objectives of FDI Companies** : General objective of any transnational company is to harness local resources (natural, human, environmental), and local market customers (which lacks in their parent country) due to this, they makes greater returns by transferring their skills or unique

uct offering to foreign markets, (who lacks them). For this they choose different types of operations like,

- ❖ Licensing and technology transfer
- ❖ Complementary distribution agreements
- ❖ Joint venture
- ❖ Portfolio investment
- ❖ Opening production unit in mother country and distribution in other countries
- ❖ Directly establishing production unit as well as marketing division

**Basic strategy of F.D.I doing companies**

- ❖ Global strategy
- ❖ Transnational strategy
- ❖ International strategy
- ❖ Multi domestic strategy
- ❖ Leveraging core competencies strategy (skills within the firm that competitors cannot match or imitate)

**Preferences of companies for F.D.I:** Foreign companies prefers those destinations for investment where they have better exchange rates, skilled human resource , low cost of labor , lower tax rates, better trade protection rules, lucrative local as well as regional market for their products. In these terms china was way ahead from India hence china attracted more F.D.I then India,(even after the downfall of financial market in 2007-2008) FIG 1.1

Pr  
od

Country/YEA	2009	2010	2011	2012
CHINA	131,057,052,870	243,703,434,558	280,072,219,150	253,474,944,300
INDIA	35,581,372,930	27,396,885,034	36,498,654,598	23,995,685,014

**Fig 1.1 All Data is in US \$ Source :- World Bank**

The reason for the better performance by china is availability of better local infrastructure and better local market. China received about 20 percent of all FDI to developing countries over the last 10 years and over \$100 billion in 2008. In terms of share of GDP and investment, FDI accounted for some 2.5 percent of GDP on average over the last five years. Which in turn strengthen its financial condition? This whole did not happen in a day for this china adopted a gradual and prudent approach. A decision has been taken in the process of liberalization. When market institutions were not fully in place in 1980s and 1990s, China experimented with opening up to foreign investment in selected coastal cities and in special

economic zones/industrial parks with a focus on attracting export oriented manufacturing FDI. Corresponding to China’s shift of its development goal from an emphasis on GDP growth towards a more harmonious balanced development, China made a radical commitment to services liberalization in its accession to WTO. This has triggered a shift of FDI to service industries. By 2009, FDI in services increased 3 times from that in 2000, while manufacturing FDI in China increased 81 percent. Regional production networks in East Asia grew substantially in the past few years and were largely aligned with China as their center. (Source:- World Bank)

But Indian story is different, India suddenly opened

its door for F.D.I in 1991 keeping cap in certain sector, this creates imbalance between the growth of different sector as we can see from FDI data of India. India attracted FDI equity inflows of US\$ 2,014 million in December 2010. The cumulative amount of FDI equity inflows from April 2000 to December 2010 stood at US\$ 186.79 billion, according to the data released by the Department of Industrial Policy and Promotion (DIPP).

The services sector comprising financial and non-financial services attracted 21 per cent of the total FDI equity inflow into India, with FDI worth US\$ 2,853 million during April-December 2010, while telecommunications including radio paging, cellular mobile and basic telephone services attracted second largest amount of FDI worth US\$ 1,327 million during the same period. Automobile industry was the third highest sector attracting FDI worth US\$ 1,066 million followed by power sector which garnered US\$ 1,028 million during the financial year April-December 2010. The Housing and Real Estate sector received FDI worth US\$ 1,024 million. During April-December 2010, Mauritius has led investors into India with US\$ 5,746 million worth of FDI comprising 42 per cent of the total FDI equity inflows into the country. The FDI equity inflows in Mauritius is followed by Singapore at US\$ 1,449 million and the US with US\$ 1,055 million, according to data released by DIPP. These data shows the F.D.I in India is tilted towards service sectors , by which an imbalance has been created for other sectors , which also contributed to the weakening of its financial market.

- ❖ **Effect of F.D.I on G.D.P and its relationship with economic growth China's GDP 2010-2011:**
- ❖ **GDP** (purchasing power parity): US\$ 9.872 trillion (2010 est.)
- ❖ **GDP global rank:** #3 (behind the European Union and the U.S.)
- ❖ **GDP, real growth rate:** 10.3% (2010 est.)
- ❖ **GDP, per capita:** US\$7,400 (2010 est.)
- ❖ **Labor force:** 819.5 million (2010 est.), #1 global ranking
- ❖ **Population below the poverty line:** 2.8%
- ❖ [ Source: CIA World Fact Book ]
- ❖ **INDIA'S GDP 2010-2011:**
- ❖ **Real GDP (INR billion)** 1 32,542 52,220
- ❖ **Real Per Capita GDP (INR)** 1 33,548 46,221
- ❖ **Investment / GDP (%)** (2011) 37.6
- ❖ **General Government Gross Debt(% GDP)(2011)** 64.9
- ❖ **Gross International Reserves (2011)(US\$ bn)** 1
- ❖ **Foreign Direct Investment inflow(2011)** (US \$ bn) 46.8
- ❖ **Foreign Direct Investment outflow (2011)(US \$ bn)** 25.8 (SOURCE: MIN OF FINANCE , GOT OF INDIA)

Now as F.D.I and economic growth is correlated so we can apply the mathematical test so as to demonstrate that how financial market & Economic growth is correlated with F.D.I for the test we will use two variables

#### • Economic growth

#### • FDI

The variable economic growth is approximated by the growth of the GDP per capita of country  $i$  at a particular time  $t$ . The variable FDI is approximated by the ratio of FDI inflows to country  $I$  at a time  $t$  over the Gross Fixed Capital Formation in country  $i$  at a time  $t$ .

The calculation can be done by performing the following tests. First, the order of integration of the GDP and FDI time series is tested using the Johansen's approach. Then, after correcting the time series for stationary the heterogeneous panel Pedroni co integration test is applied for the economic growth and FDI variables. The Pedroni test allows for cross-sectional independency among different individual variable effects. Second, in order to detect the direction of causality between the two variables the technique of Error Correction Mechanism is applied.

**Heterogeneous Panel Cointegration:** The principle of testing for co integration is to test whether two or more integrated variables deviate from each other. In other words, if the variables are co integrated, they move together over time so that short-term disturbances will be corrected in the long-term. This means that if, in the long-run, two or more series move closely together, the difference between them is constant. Otherwise, if two series are not co-integrated, they will deviate from each other.

**Causality Tests:** Pedroni's heterogeneous panel cointegration method tests only for the existence of long relationships. The tests indicate the presence or absence of long time links between the variables, but do not indicate the direction of causality when the variables are co integrated.

Let us discuss the pedroni's method in brief. The starting point of the residual-based panel cointegration test statistics of Pedroni is the computation of the residuals of the hypothesized cointegrating regression

$$y = \alpha_i + \delta_{it} + \beta_{1i}X_{1it} + \beta_{2i}X_{2it} + \dots + \beta_{mi}X_{it} + e_{it} \quad (1)$$

Where-  $t = 1, \dots, T$ ;  $i = 1, \dots, N$ ;  $m = 1, \dots, M$

Where  $T$  refers to the number of observations over time,  $N$  refers to the

Number of individual members in the panel, and  $M$  refers to the number of regression variables.

If the variables in the model contain unit roots, the Error Correction Model (ECM) is used to examine the long-run or co integrating relationships between the

time series as well as the existence and the direction of causality between the variables.

The estimated bi-variate ECM for each country takes the following form:

$$\Delta G_{it} = \alpha_0 + \sum \alpha_{1i} \Delta G_{it-1} + \sum \alpha_{2i} \Delta FDI_{it-1} + \phi ECT_{it-1} + u_{iit} \quad (2),$$

$$(i=1...n_1), (i=1...n_2), \Delta FDI_{it} = b_0 + \sum b_{1i} \Delta FDI_{it-1} + \sum b_{2i} \Delta G_{it-1} + \phi ECT_{it-1} + u_{2it} \quad (3) \quad (i=1...n)$$

Where  $\Delta$  is the difference operator,  $G_t$  is the GDP per capita,  $FDI_t$  is the FDI as percentage to gross fixed capital formation,  $ECT_{it-1}$  is the error correction term derived from the long-run co-integrating relationship,  $u_{it}$  and  $u_{2t}$  are the error terms  $t$  denotes the years and  $n_1, n_2$  are the lag orders of  $\alpha$ 's and  $b$ 's respectively.

The VECM results distinguish between short-run and long-run Granger causality. The coefficients of the lagged error correction term show that there is a long-run causal relationship between economic growth and FDI. It also indicates that FDI and economic growth are adjusting to their long-run equilibrium relationships. The coefficients (and the magnitudes) of the ECM indicate the order of adjustment to the long-run equilibrium relationship.

Another model which shows economic growth relationship with F.D.I (technological progress, increase in the productivity) is Robert Solow model, Which says that economic growth follows the Cobb-Douglas relationship with increase in productivity.  $Y(t) = K(t)^\alpha (A(t)L(t))^{1-\alpha}$  where  $t$  denotes

time,  $0 < \alpha < 1$  is the elasticity of output with respect to capital, and  $Y(t)$  represents total production.  $A$  Denotes to labor-enhancing technology or knowledge. Thus  $AL$  represents effective labor. If All factors of production are fully employed, and initial values  $A(0), K(0),$  and  $L(0)$  are given and number of workers, i.e. labor, as well as the level of technology grow exponentially at the rate  $\gamma$  and  $g$ , respectively, then  $L(t) = L(0)e^{\gamma t}, A(t) = A(0)e^{gt}$

This shows that economic growth and F.D.I are highly correlated as F.D.I bring employment and technology and productivity which increases the economic growth.

**Relationship between economic growth and stock market:** The stock market is a normal feature of the economy of any country and it is thought that stock market promote the growth and development of the economy. It plays an important role in the

growth of commerce and industry and business activity, which ultimately affects the economic growth of the country to a larger extent. However, the nature and direction of relationship between stock market development and a country's economic growth rate is doubted and debated nowadays. By using a regression model of granger causality test a relationship has been found between economic growth and stock market by using two parameters of stock market development, namely; size of the market and liquidity. These two measures can be regressed against economic growth rate and then it defines Stock market size as the share of market capitalization over GDP (referred to as market capitalization ratio); and, market liquidity as volume of share traded over GDP (referred to as value of shares traded ratio) and volume of shares traded over market capitalization (referred to as turnover ratio). The result indicates that there is a positive relationship between economic growth and stock market development in India as well as in china. The granger causality test also indicated the nature of relationship between stock market development to economic growth. It has been also found that stock market liquidity, as opposed to stock market size, promotes economic growth.

So it means that stock market liquidity, which is important, not its size hence sometimes an inflationary market shows high stock market growth, but their real GDP do not increases, it can be shown with the famous formula of George Reisman

$$P = \frac{D}{S}$$

where:  $P$  is the price of any commodity,  $D$  is the demand of that commodity,  $S$  is the supply of that commodity, Here  $p$  is directly proportional with  $D$  and indirectly proportional with  $S$  i.e. , it means that price of any commodity can be increased directly increasing its demand but lowering its supply.

This result can also be applied to the stock market, as for the profit of companies this rule will hold, it means that for the rise of stock market liquidity of market is must rise

This can be observed historically from U.S A market





Source :- Thechartstore.com

**Market Volatility:** Volatility is up-and-down movement of the market. It's usually measured by the standard deviation from the expectation. If we look at a day, the movement is typically up or down. Any movement up or down from its expectation is the volatility. OR volatility can also be defined as "Ability to buy or sell significant quantities of a security quickly, anonymously, and with minimal or no price impact."

The biggest driver of volatility is a drop in the market. There are simple leverage reasons for which market drops cause volatility. But beyond that simple reason, following a drop in the market, volatility typically shoots way up for a time before it dampens down again.

We had an almost a 50% drop from top to bottom in the financial crisis (year 2008 in India). Then the markets came up almost 100% which brought us back to where we started, even more high. What we're seeing from the financial crisis is that, crisis started with the poor quality of mortgages, but the general tendency of volatility is to return to normal levels. This volatility is not going to be permanent, but it may lasts for shorter time span, the drops are associated with large increases of uncertainty, because we didn't even know, that how much it will take for the financial crisis to subsidies, but it is partly fact that through government efforts, crisis, was minimized and that effort caused the stock market to rally and recover.

Roll (1984) provides a simple model of how the bid offer, spread might impact the time-series properties of returns i.e. how market volatility effects market. Roll suggests the following simple model of price

dynamics in a market with transaction costs:  $\Delta p_t = c \Delta q_t + u_t$ , where  $p_t$  is the log trade price,  $c$  is the first auto covariance of price changes or one-half of the posted bid-ask spread, and  $q_t$  is a trade indicator.

Hasbrouck (2009) generalizes the Role model by adding a market factor:  $\Delta p_t = c \Delta q_t + \beta_m r_{m,t} + u_t$ .

**Volatility in India and china:** India and china both have already faces the wrath of volatility in market. According to Reuters.

**(Reuters)-** The bold monetary experiment that the Indian and Chinese central banks engaged in this year might one day be hailed as a success. So far, the result has been unprecedented market volatility and little else.

Both central banks targeted interbank rates to control the supply of money, aiming for a more surgical monetary tool than orthodox bank reserves or policy interest rates.

The People's Bank of China (PBOC) and the Reserve Bank of India (RBI) were worried that sticking with traditional policy rates or bank reserves would have had a greater impact on the overall economy and slowed growth, which they wanted to avoid.

"They shifted to a more interest-rate based system in both cases. Both central banks should be applauded for doing that," said Frederic Neumann, co-head of economic research at HSBC in Hong Kong.

Both central banks are looking to liberalize their markets, but the PBOC and RBI are adopting a similar policy strategy in very different situations and for different reasons.

China is now using its open market operations almost exclusively to try to rein in a credit binge. Apart from

growth concerns, the PBOC feared that raising policy rates or reserve ratios would have added unwelcome fuel to a rally in its currency.

India had similar GDP concerns after growth slumped in recent years. But, unlike China, it urgently needed to shore up its currency, which dropped in August to a record low, and to tame steep inflation.

"India's volatility has its origins in frequent and impulsive monetary policy swings.

"The volatility in interest rates is certainly negative for economic growth in both markets. It makes planning decisions much harder," said HSBC's Neumann.

Unlike China, India has relatively deep short-term funding markets and mature derivatives trade, but interbank rates have moved in a wide 9 percentage point range this year.

The Sensex rallied to record highs after new RBI Governor Raghuram Rajan took steps to stabilise the rupee.

However, business investment has suffered, economic growth has weakened further and markets have been left to second-guess the central bank's priorities: the currency, growth or inflation.

Rajan, an ex-IMF economist, may have picked the wrong time to try and deepen India's interbank markets, namely while he was fire-fighting a currency crisis.

His attempts to create tiered overnight rates and wean India's banks off volatile short-term funding have left markets confused about which benchmark to follow and which way policy is headed.

The two central banks may have swerved too far to embrace a new policy focus, economists say.

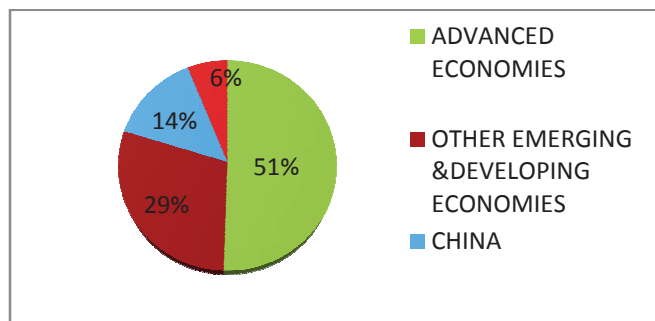
"Perhaps in the transition phase central banks have to use both tools, the old and the new market-based tools, concurrently and redouble efforts at creating deeper money and capital markets" said Neumann.

"But you can't go back. That would maybe stop the natural evolution in its tracks.", **Source:-** Reuters Website

Report of Reuters is clearly showing that India and China are both suffering due to the volatility in the stock market. They are trying innovative monetary policies to tackle this volatility as volatility is concerned with inflation and inflation hampers economic conditions and production, which makes any country unfit to attract F.D.I

**Role of World Bank:** World Bank is working through its subsidiaries like IBRD (International Bank for Reconstruction and Development), IDA (International Development Association), IFC (International Finance Corporation), MIGA (Multilateral Investment Guarantee Agency), ICSID (International Centre for Settlement of Investment Disputes). World Bank is working hard to eradicate poverty and financing countries for the projects of basic needs like power and education. By this World Bank is empowering peoples and sorting more and more peoples contribution in the economic growth which in turn stabilizes the economic growth and enhance the purchasing power of a country and creates a wide market of the consumers as well as contributors and this controls the volatility and instability of financial market, also it provides more immunity for an economy towards international disturbances.

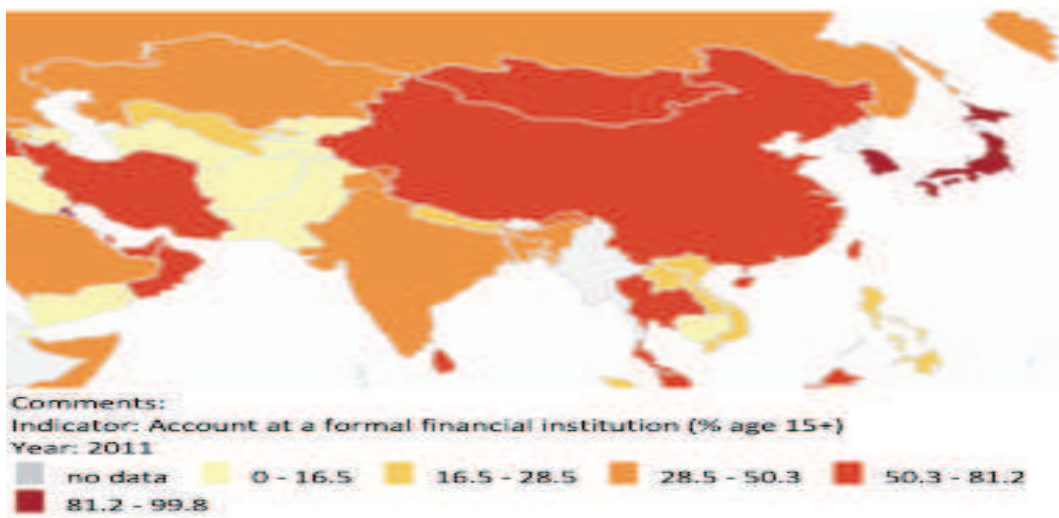
Like IFC launched the Excellence in Design for Greater Efficiencies (EDGE), a holistic approach to the green buildings ecosystem that helps builders assess cost effective methods to incorporate green features into building design. **(Source:- World Bank)** IFC is taking an integrated approach to support the country's capital markets – an exciting combination of off- and onshore programs, and advisory services intended to support the country's growth agenda. **(Source:- World Bank)** World Bank is also contributing to its member nations in the field of financial empowerment and helping micro financial institutions to empower poor peoples and by this helping them to break the vicious cycle of poverty and making them to contribute to the G.D.P



SHARE OF DIFFERENT ECONOMIES TO THE WORLD (PPP) -2011

China-14%, India-6%, Advanced economies- 51%, Other developing economies-29%  
 (Source:- IMF world economic report 2011) Data are showing the World Bank effort in this direction

S.no	country	G.D.P
1	United States	16,244,600
2	China	8,227,103
3	Japan	5,961,066
4	Germany	3,425,928
5	France	2,611,200
6	United Kingdom	2,475,782
7	Brazil	2,252,664
8	Russian Federation	2,014,775
9	Italy	2,013,775
10	India	1,858,740



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All data are in million of US dollar of year 2012 Source :- World Bank

Economist.com rankings

**Global innovation**  
Selected countries, 2004-08  
(2002-06, where different)

Rank		Index*
1	Japan	10.000
2	Switzerland	9.711
3 (5)	Finland	9.503
4 (3)	United States	9.497
5 (4)	Sweden	9.444
6	Germany	9.404
7 (8)	Taiwan	9.369
8 (9)	Netherlands	9.165
9 (10)	Israel	9.126
10 (7)	Denmark	9.077
11 (15)	South Korea	8.940
12 (11)	Austria	8.934
13 (12)	France	8.885
14 (13)	Canada	8.868
15 (14)	Belgium	8.788

\*On a scale of 1-10  
Source: Economist Intelligence Unit

Source:- World Bank

**Sustainability of local industries:** Former CEO of Wal-Mart, has famously argued that “sustainability represents the single biggest business opportunity of the 21st century and the next main source of

competitive advantage.” These turbulences offer a testing time for local industries to develop and check their strategies for the sustainability in the market with the change in

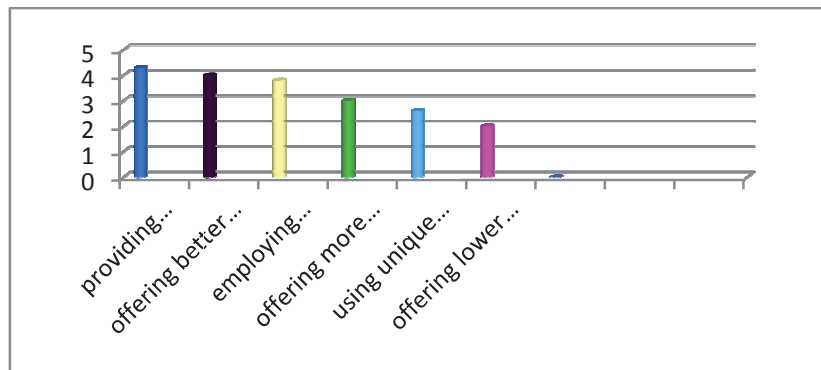
time.

Indian local industries have also proved this with time, by adopting different strategies like.

❖ Contributing to the environment and communities

❖ Keeping administrative set up simple

❖ Balancing the external market forces. (like:- political, technological, economic, social)



Different strategies used by local companies

**Conclusion and recommendation:** This paper has tried to find out a relationship between F.D.I and economic growth and financial market, after discussing all aspects I reached on the conclusion that it is social sector which is important to attract more F.D.I , and sound economic condition and booming financial market , As we can see that brazil remains stable during this whole turbulences , reason for the stability of brazil is not its purchasing power parity , but the fact that between 2003 & 2004 , more than 45 million people were pulled out of poverty and joined the middle class , today it remains one of the most middle class country even though there are huge disparities between earnings of different classes. Also there should be better regulation and operation of financial markets and commodity trading, as when

there is loss in the stocks, investors and fund managers began to do collective trading in derivatives, i.e. begins hedging which in turn raises the pressure on commodities, even though there are no scarcity of commodities in the market, this creates the imbalance in economical conditions and import export of any country. For example speculative trading in the year 1995 by nick lesson , a trader at baring bank, made poor and unauthorized investments in futures contracts. Through a combination of poor judgment, lack of oversight by the banks management and regulations leads to 1.3 billion U.S dollar loss that make the centuries old bank bankrupt .So our government should learn from the past and frame more effective regulation policies.

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Madhuban nagar, sukhilal, MARG,alambagh,lucknow.  
sheel\_awasthi@rediffmail.com