Abstract

Economic development is a topic so vast that it can be approached from many perspectives. Article aims to highlight the role that FDI play in China's economy by stimulating exports, resulting in gaining important positions in terms of Global Competitiveness Index. Capacity for innovation, also stimulated by FDI, contribute significantly to improving the place given by GCI. Approaching only these two issues, exports and innovation, can be easily seen that FDI improves the competitiveness position.

Key words: FDI, China, export, innovation, competitiveness

A natural order: FDI, exports, competitiveness

Talking about the effects of FDI on host countries gain the inevitable trend of controversy. Opinions range from the radical, which are sought and found and highlighted only the positive aspects resulting from such investments, to the most temperate with which lays the balance of pluses and minuses in a rational and impartial analysis.

The fact is that such investment is accompanied by both positive and negative effects that propagate simultaneously or out of phase in the receiving economy. Based on this belief, the problem turns into a manipulation of these effects, so that the positive parts to be operated with maximum efficiency.

There are many countries receiving foreign direct investment, but only some of them really knew how to seize from them, thus demonstrating that they understood and accepted that FDI is a "necessary evil", an almost obligatory step in the transition to a developed economy. For many countries in which capital formation is a problem, FDI appear as saving solution often being the only option in these economies.
The problem of developing nations from the inflow of such investments is outlined in a masterly manner by Mises. It argued that countries like the United States, Russia, Germany and many other European states owe their beginnings of development to investments from accumulated surplus in the UK. To further underscore the role of FDI, Mises declared that "The most important event in the history of the nineteenth century was foreign investment" (Mises, 1995).

Linking Foreign Direct Investment inflows and competitiveness of a nation is not a very easy approach from the perspective of the Global Competitiveness Index. This is a fairly complex indicator, established following the analysis of twelve areas (pillars). World Economic Forum, assigning different weights, determine the following pillars: 1) Institutions, 2) infrastructure, 3) macroeconomic environment, 4) health and primary education, 5) higher education and training, 6) goods market efficiency, 7) labor market efficiency, 8) financial market development, 9) technological readiness, 10) market size, 11) business sophistication, 12) innovation.

In a brief analysis we can easily discover that the Foreign Direct Investment interact with all the 12 pillars both in terms of influencing the ability to attract such investment and the effects of their due. Thus, some pillars are among the direct beneficiaries (technological readiness, openness and market size, innovation), others benefit indirectly, while being a prerequisite for the influx of FDI (infrastructure, higher education and training, efficiency labor market, market efficiency goods and services), and a third category represents the fundamental elements to attract foreign capital (institutions, macroeconomic stability).

Going on the principle that the whole is more valuable than the parts separately, we can say that the interaction of these components is very important, they can not operate effectively in isolation. Thus, the positive effects of FDI on a pile spreads to others and create a spiral that enhance the positive impact of investment.

Technological readiness, market size and openness and innovation are the three components of the competitiveness of a nation to which we have chosen to highlight the link between FDI inflows and the level of competitiveness, stating that it should be noted that the true size competitiveness is given by the interaction of the 12 pillars.
Export performance and competitiveness are often regarded as synonymous. Just as a firm competitiveness can be measured by its sales or increasing market, competitiveness of a nation is identified with its export performance. However, the definition of a nation's competitiveness in this way is unsatisfactory because countries do not compete but companies do so.

In one of his fundamental works, Porter (1998) argues that the level of national competitiveness is measured by two sets of indicators: (1) the presence of substantial and sustained exports to a range of countries as diverse and (2) significant presence of FDI outflows based on skills and assets created in the motherland. Certainly the simultaneous presence of these indicators is feasible only in developed economies, which already can afford to engage themselves in FDI. For developing countries, the share of exports is higher compared to that of FDI outflows in the general level of competitiveness. Moreover, the World Economic Forum assign different weights to these factors in calculating the global competitiveness index, according to the stage of development of the country.

Stage Two of development, as captured by the World Economic Forum, the economies based on efficiency, establish the link between exports and competitiveness. More specifically, the 10th pillar of a nation's competitiveness, openness and market size, is one who sits exports among the determinants of competitiveness.

THE CASE OF CHINA

One of the telling examples in the relations established between FDI and exports to countries receiving such investments, is given by the Chinese economy. From an almost isolated economy in the 1970s, China became the largest FDI recipient among developing countries, and second worldwide after the United States since 1993. FDI flows into the country in 1997 totaled approximately $200 billion, which represented 31% of all FDI into developing countries. More important for our study is the share of exports in total exports of foreign affiliates in China, which increased from a negligible 0.27% in the year 1984 to 20% in 1992 to 44% in the year 1998. Surprising increase in exports of multinational companies subsidiaries is the result of a processed product export program. Thus, inputs and components needed to produce goods for
export, were imported into a duty-free regime, with minimal administrative interference. Another important factor for FDI -exports link is their spatial concentration in the eastern region of China (Zhang and Song, 2000). Between 1986 and 1998, coastal area contributed more than 85% of total exports and has also attracted more than 85% of total FDI in China. The relationship between FDI and clusters is one that takes place in both directions. On one hand, clusters have the ability to attract FDI by providing access to resources, technologies and markets (Porter, 1998, p.241), and secondly some externalities inducing multinational companies in the clusters by providing access to capital, technology and capabilities of the domestic components of clusters. Gugler and Bruner (2007) determine the same indisputable link between FDI and clusters, stressing that the influences are stronger in this case than in dispersed industries due to higher absorption capacity for integrated companies present in clusters.

Regarding the direct effects of FDI on exports, Zhang and Song (2000) considers it necessary to divide the export activities of multinationals in three categories, depending on production traits:

1. Processing of local raw materials. Within this category, subsidiaries of multinational companies have better export potential than local companies because of existing internationally business contacts, marketing superior capabilities and advanced technologies;

2. Exports of new labor-intensive finished products. In this case there are many opportunities for developing countries receiving FDI, to become major exporters such as textiles and other consumer goods. Companies seeking to extintă global exports, have great difficulty in establishing a distribution network, keeping pace with rapid changes in the tastes of buyers, meet the new rules of international technical and safety standards. Lack of such capabilities is a major barrier to enter the international markets for exporters in developing countries.

3. The export of labor intensive goods in vertically integrated production. Clearly this type of export is related to the presence of multinationals.
Lemoine (2000) shows that almost the entire increase in Chinese exports during the 1990s can be attributed to foreign-owned enterprises, but particularly those that were used to source non-Japanese FDI flows, flows that were activities directed towards export processing factor labor intensive. These activities were concentrated in a relatively small number of industry sub-sectors such as electrical and electronic equipment, footwear, toys and leather clothing. Lemoine argues that most activities consist of processing of imported intermediate goods, into finished or semi-finished goods, which were then re-exported. Next, coming towards the 2000s, Lemoine shows that FDI in China from Europe and the U.S. are concentrated in subsectors in which China has no comparative advantages, and therefore production resulting from these activities tend to serve a greater local markets than those for export.

Graham and Wada (2001) envisage two possibilities which can give reasonable answers to such a situation, the opportunities that arise as a result of industrial policy pursued by China. The first is that these operations are simply anti-trade, that is meant to substitute for imports. For two of the sectors in which foreign companies are heavily involved in the local market, namely food processing and transport, these businesses operate behind very high tariff walls. If the political goal is to obtain modern technology and competitive local industry, it is rarely achieved. Conversely, the lack of real competition, or forcing through various legislative levers of understandings with local suppliers may lead to adverse effects from multinational companies who feel this way controlled, effects in preventing the transfer of technology embodied.

A second possibility is that these companies represent the vanguard of creating new technological capabilities of China. Evolution of the contribution made by foreign subsidiaries in China's exports can easily find in the following table:
Table No.1. FDI flows, total exports and exports of multinationals subsidiaries in the period 1980-2004

<table>
<thead>
<tr>
<th>Year</th>
<th>FDI Inflows ($ Billion)</th>
<th>Cumulative FDI ($ Billion)</th>
<th>Total Exports ($ Billion)</th>
<th>Exports by FIEs ($ Billion)</th>
<th>Share of FIEs (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>0.036</td>
<td>0.570</td>
<td>18.119</td>
<td>0.082</td>
<td>0.05</td>
</tr>
<tr>
<td>1985</td>
<td>1.661</td>
<td>4.587</td>
<td>27.350</td>
<td>0.297</td>
<td>1.08</td>
</tr>
<tr>
<td>1995</td>
<td>37.521</td>
<td>133.024</td>
<td>148.797</td>
<td>46.876</td>
<td>31.51</td>
</tr>
<tr>
<td>2000</td>
<td>40.715</td>
<td>346.634</td>
<td>249.211</td>
<td>119.441</td>
<td>47.93</td>
</tr>
<tr>
<td>2001</td>
<td>46.878</td>
<td>393.512</td>
<td>266.150</td>
<td>133.218</td>
<td>50.05</td>
</tr>
<tr>
<td>2002</td>
<td>52.743</td>
<td>446.255</td>
<td>325.570</td>
<td>169.985</td>
<td>52.21</td>
</tr>
<tr>
<td>2003</td>
<td>53.505</td>
<td>499.760</td>
<td>438.370</td>
<td>240.340</td>
<td>54.83</td>
</tr>
<tr>
<td>2004</td>
<td>60.630</td>
<td>560.390</td>
<td>593.370</td>
<td>338.610</td>
<td>57.07</td>
</tr>
</tbody>
</table>

Source: adapted from Zhang (2005, p.14)

Since the year 2004, more than 50% of Chinese exports were achieved through subsidiaries of multinational companies, is obvious and indisputable direct effect of FDI on export performance in this country.

Going forward with the study of this phenomenon, Xu and Lu (2008) investigated the impact that multinationals have not only on overall exports, but the degree of sophistication of exports. The importance of the study is relevant given that the sophistication degree of exports could symmetrical translate into competitiveness of exports. The exported products incorporating more technology they can become more competitive in an appropriate global demand conditions. One of the conclusions is that the impact of multinationals on the degree of sophistication of exports depends on the organizational form of multinational and, to some extent the source of the company. It establishes a positive correlation between the degree of sophistication of exports from a particular industry and the presence of multinationals from OECD countries, whose capital is wholly owned by them (Wholly Foreign Owned Enterprises). During the period between 1998 and 2005, the increased presence of such multinationals and the
low presence of JV type (Joint Venture), have contributed to an increase of 28% of the level of sophistication of exports. The results are logical, in this case, technology transfer and its protection being made safe in the shelter of the full ownership of capital. This finding is contrary to the results obtained by Buckley et all (2007), they demonstrated that the investor’s country of origin does not influence the effects of FDI on exports.

Focussing on the same direct effects of FDI, they hold that multinationals share in total exports of host country and using a regression type analysis with the export as a dependent variable and one independent variables represented by the influx of FDI, Johnson (2006) extends research on the seven countries in the region of Southeast Asia, countries whose economies have seen significant FDI flows: Hong Kong, Indonesia, Korea, Malaysia, Singapore, Taiwan and Thailand. The results for the period considered, respectively 1980-2003, are consistent with the studies discussed above: FDI inflows tend to have a positive effect on host country exports, because true transformation subsidiaries platform for exports.

Buckley et al. all (2007), using data for the period between 1983 and 2002, examines the relationship beyond the FDI-exports direct aspects. They argue that China's export expansion is due not only MNC subsidiaries but also to local exporters, but this increase recorded in the domestic firms is in turn related to FDI. Externalities may occur in circumstances that create links between local firms and MNCs, becoming the first suppliers or subcontractors of the latter.

These links are converted into channels through which technology or knowledge about international markets can be transmitted. In addition, local firms can learn how to be successful in the international environment by imitating the activities of MNCs. MNCs can also train the local workforce in export management, and companies can acquire this knowledge through their employment of such a type of labor.

To highlight how the positive effects of FDI are propagated towards local exporters of China, Rodrik (2006) brings into question the types of FDI that are found in this area. It points out that very rare cases where there are companies that own 100% foreign capital. Most investments are in the form of JV (Joint Ventures) between foreign and local firms. Thus it provides a permanent connection between MNCs and local environment. In a JV type permeability on technologies and management practices, especially those for exports is relatively
high compared with a greenfield investment. Moreover, the Chinese government encouraged the establishment of such companies, as supported by statistics which show that most foreign capital in China is found today in the form of JV, precisely in view of facilitating the transmission of indirect effects of FDI on the local economy.

Besides these indirect benefits can be raised and the possibility of adverse effects on exports of local companies. Subsidiaries of MNCs can supplement their acquisition by increasing their inputs locally. Thus, some local companies' products were originally intended for export may be "diverted" to the production processes of MNCs. Moreover, these companies may engage in the manufacture for export of similar products of domestic companies, thus reducing their market share. Possible negative aspects are captured and by Zhang (2005), he stressed that FDI to the local market orientation and their focus on the cheap labor and raw materials processing, can also make in local export inhibitor. This perverse effect may be beneficial but turn into a long term given that the impetus for local exporters to improve their production system, improving productivity. Indeed adverse effects may occur but these must be embedded in a medium and long term perspective, at which decreases in importance compared to the benefits generated in the receiving economy.

Hale and Long (2006) diverse the palette of effects on local exporters, thus making the difference between privat local firms and companies with state capital. Thus, the study shows that FDI increase the likelihood of local firms to engage in exports only if they already are privately owned at least 36%. Thus, an increase of 12 percentage points in the presence of FDI leads to an increase of 1.4 percentage points in the probability that state-owned companies to engage in exports, while private companies win probability is 5.7 percentage points. In other words, they represent increases of 6% and 26% in the probability of local firms to export to the type of property (public or private). Arguments that support such a distinction is the fact that the type of private property provides greater efficiency in resource allocation and organization of production. Thus, flexible wage policy and the policy of private companies allow their staff to more easily attract employees who could become channels for transfer of know-how from foreign firms to the domestic capital.
In the indirect effects, innovation occupies a special place. We must determine the effects of FDI on innovation in local exporters and hence on exports of these companies, obtaining a causal relationship of FDI  >  Innovation > Export.

There are several important channels through which FDI can lead to improved business innovation in local companies in the host country (Cheung and Lin, 2004) and thus the export capacity:

1. firms can learn about products and technology by the MNCs through the process of reverse engineering;
2. Local businesses can obtain know-how from foreign ones by "stealing " highly qualified workforce;
3. FDI flows have a demonstration effect on local business Research & Development. By their presence in local markets, MNCs can inspire and encourage local inventors to develop new products or processes. This presence may shorten the road of local companies to discovering innovations. Moreover, the conditions under which products and technologies that MNCs bring to the host country have already been tested in foreign markets, risks associated with the innovation process in the same direction being lower for local businesses. Another way is that first imitate and then proceed to the innovation (Glass, 1999).
4. effects can propagate vertically from MNC subsidiaries to local suppliers through the traditional transfer of technology and capabilities transfer that can stimulate the innovative capacity of local suppliers.

Cheung and Lin (2004) conducted an empirical study based on data from 26 provinces of China, for a period between 1995-2000. Thus, the effect of FDI on local innovation capacity is strongest for minor innovation such as patents on the exterior design. A 1% increase in FDI flows, lead to an increase between 0.15% and 0.47% in the number of exterior design patents. This increase in activity and innovation of local companies can ever be a boost to export activities.
Indirect effects of FDI on exports of an economy can be found mainly in increasing the capacity of local firms to export, to meet international competition. Overall competitiveness is much improved by the exposure of a competitive environment in which MNCs have certain specific benefits related to export activity. If direct effect is easier to quantify, is generally resumed percentage calculations, indirect effects, in particular the determination and quantification is much more difficult, requiring in-depth analysis based on complex regression models. As important, indirect mode of influence may in time gain the sense of a macroeconomic dimensions of competitiveness, engaging demonstration effect through much of the economy sectors.

An interesting parallel is to track the evolution of FDI inflows and the Global Competitiveness Index, their relationship is already established. We will take as reference period the years 2002 - 2010, its characteristic being accelerated target indicators.

Table No. 2 Evolution of indicators on FDI and global competitiveness, innovation and market size in the case of China

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDI (mil$)</td>
<td>216,503</td>
<td>228,371</td>
<td>245,467</td>
<td>272,094</td>
<td>292,559</td>
<td>327,087</td>
<td>378,083</td>
<td>473,083</td>
<td>473,083</td>
</tr>
<tr>
<td>GCI</td>
<td>54</td>
<td>35</td>
<td>34</td>
<td>30</td>
<td>29</td>
<td>27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market size</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Innovation</td>
<td></td>
<td></td>
<td></td>
<td>28</td>
<td>26</td>
<td>26</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Before going further with this analysis is interesting to note that from the perspective of the 10th pillar of competitiveness, namely market size, the last four years China ranks second, making it very high in the hierarchy of competitiveness global. Indicator of market size include the level of exports, entitling us once again to support the link between FDI inflows and the level of competitiveness as it is calculated in the World Economic Forum. Another useful observation
is that in terms of innovation capacity, influenced the FDI issue as I have said, China fared relatively well with a positive outlook.

We have shown the evolution of FDI inflows for 2002-2004 and the prospect that some effects from FDI, especially indirect ones, make their presence felt in the years following the initial investment. For the same reason, the Global Competitiveness Index is presented and the following year for which data are held about the level of Foreign Direct Investment.

A first observation is that for the period considered, the trend level of FDI entering China's economy is rising, with variations in intensity from year to year. Between 2004 and 2009, the FDI has doubled from a level of approx. $246,000,000 to $473,000,000. The level of investment in 2004 is somewhere at approx. 50% of the level reached in 2009. Taking into account a similar time and magnitude but delayed by one year from the preceding analysis, we detect that from the standpoint of the place it occupies on the scale of China's global competitiveness, it climbed from position 54 in 2005 position 27 in the year 2010. In China, the relationship between the position given by the Global Competitiveness Index and the inflow of FDI is a dependent and inversely proportional.

CONCLUSIONS

China's sustained development of late certainly can not be made solely on account of Foreign Direct Investment in the country they entered. What we support is that while the FDI have found a favorable environment for development, enabling environment at both the institutional and employment, economic development results on the line can only be notable.

The size of exports, level of training and qualification of the workforce and innovation are issues that affect a country's position in terms of competitiveness. In turn these components and others, are influenced in a way directly or indirectly by the structure and level of foreign direct investment. Following a simple logic we can only infer that this type of investment is one that contributes, help raise the competitiveness of nations in terms of their efficient operation.

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