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COMPARITIVE ANALYSIS OF INDIA AND SOUTH KOREA'S POST REFORMS GROWTH TRAJECTORY

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ABSTRACT

Post the 1991 liberalisation policy, India has witnessed massive growth. The data available from World Bank from 1991-2010 provides testimony to the above statement. The miraculous growth in the South-East Asian countries drew the attention of other developing nations all around the world. One such successful nation was South Korea. By conducting a multivariate time series analysis, this paper tries to answer the question from India's perspective considering the growth trajectory of South Korea that if India follows the strategy adopted by South Korea, can it achieve the same kind of economic growth? The paper delves into a theoretical and an empirical research to find out the role of economic reforms and human capital on the economic growth in the post reform period of the two countries in question- India and South Korea. By drawing a comparative analysis between the effects of reforms and human capital on India's GDP (from 1991-2012) and on South Korea's GDP (from 1980-2000), this study provides a strong case for India to follow an export-led and a manufacturing sector driven growth which is akin to the South Korean economic policies of the 1960s and 1970s. This study also validates the importance of the most coveted 'Make in India' campaign initiated by India's newly elect Prime Minister Mr. Narendra D. Modi, by showing a strong positive relation between manufacturing value added and the growth rate of GDP.

Keywords: Multivariate, Growth, Human Capital, Manufacturing

1. Introduction

At the time of independence, the Congress government under the presidency of Jawaharlal Nehru adopted an economic model that was of state led and import substituting industrialisation. Congress committed itself to nationalism and

socialism, which although won them substantial popularity, came at the cost of undermining vigorous economic growth. India followed a closed and static model of development aiming at self-sufficiency unlike South Korea which took a selectively capitalist stand in attempting to reach its

desired growth levels by following a static model itself. We can relate this with the most often economic debate of growth versus inequality. On one hand where India concentrated more on prioritising political law and order and chose to adopt inclusive growth policies, on the other hand South Korea followed ruthless capitalism wherein they focussed primarily on developing their export oriented manufacturing industries creating Chaebols consisting of only five major world class companies which have shown a capacity to serve the world. The intuition behind comparing South Korea and India is that they were once (during 1960s) at the same juncture in terms of GDP levels, growth rate and other economic conditions from where they took to almost different directions. Both the countries were extremely poor, India's per capita income was 3.7% and South Korea was at 4.9% of GDP. Both were agrarian economy with 40% of national income accruing to farming. Both had financial sectors where government owned banks dominated and there was a presence of an unorganised financial market. Both had import substitution policies in place. The human capital endowment was much more in India. India had an edge with its savings rate of 12% of GNP while for Korea it was only

8%. The size of the Indian economy gave its industries a large domestic market which was not the case with South Korea. Also in case of India, British had already laid the foundations for the development of railways and other infrastructure which were missing in South Korea. Despite India having an edge over South Korea then, we see that in the present scenario South Korea has emerged as the fastest grown economy (world's 12th largest economy) and has set an example for other developing nations. The focus of this research will be to track down the transition of South Korean economy and compare it with the Indian experience so that we can find the reasons as to why and how South Korea managed to grow at such an unprecedented rate in just a span of 40 years (1970-2010), while India although grew but could have done much better. The time period considered for the analysis of South Korea is 1980-2000. The time period of analysis is justified by the fact that South Korea underwent a major export driven revolution under the authority of General Park in the preceding years. By studying the policy reforms of South Korea then, this paper tries to analyse its success in the Indian economy in the present scenario. The basic research design of my study can be classified into the following

major findings: the validity of Indian economic reforms of 1991 on the Indian GDP (1992-2012) and a comparative study with respect to South Korea (1961-1980), impact of the Indian manufacturing output as well as exports of manufactured goods on Indian GDP (1992-2012), validity of the 'Make in India' campaign looking at the present economic scenario, criticisms regarding the current condition of the manufacturing sector and last but not the least, policy recommendations to overcome the challenges so as to put India on a manufacturing growth trajectory.

2. Review of literature

The 1991 economic reforms in India has not failed to attract the attention of economist around the globe because of their extensive and rigorous nature. (Ahluwalia, 2002) explains that what India followed was a process of gradual and calibrated policy changes in all the sectors ranging from agriculture to manufacturing and from financial to external. He also argues that India followed a very calculative approach to liberalization, giving limited access to foreign investors and maintaining high tariffs on some of the agricultural products. (Srinivasan, 2003) argues that India focused on the formation of stabilization programmes which aimed at addressing the

imbalances in fiscal and current accounts of India. According to (Srinivasan, 2003) liberalization on the external front was majorly aimed at stimulating exports and removing the various trade barriers such as import licensing, customs duty and quantitative restrictions to boost imports in the country. The motive behind trade liberalization was to increase the volume of trade and to better integrate India with the rest of the trading world. (Banga & Das, 2012) argue that, after the initiation of WTO in 1995, India also committed itself to various multilateral and bilateral obligations. According to its multilateral obligations, India restricted its customs duty to two third of its manufacturers and removed tariffs on a wide range of Information Technology products. On the bilateral front India permitted the import of goods with zero duty from Singapore, South Korea, Sri Lanka, SAFTA and ASEAN. As argued by (Partha Ray, 2012) the economic reforms of 1991 also constituted enormous policy changes in the banking sector. RBI gave licenses to private banking firms in order to increase completion in the banking system to promote a more efficient stream of capital flow to the private sector of the economy.

The view among economists like T.N Srinivasan, Rashmi Banga and Abhijit Das has been that the 1991 reforms marked the structural break in India's growth performance while a different view prevails among economists like (Rodrik & Subramanian, 2004), (DeLong, 2005) and (Balakrishnan, 2005). According to their study, the real trend break in India's economic growth came about in the early 1980s as opposed to the 1991 reform period. This finding does not obscure the fact that 1991 reforms have been extremely instrumental in leading to the high growth levels that India has experienced in the last three decades. It only flags the important discovery that the actual initiation of growth took place a decade before the major reforms. South Korea's rapid economic development which took place due to its reform phases in 1960s and in 1970s was primarily because of its neo-mercantilist trade policies initiated by President Park Chung-hee (Noland, 2005). (Panagaria) argues in his paper titled "Miracles and Debacles: In defense of Trade Openness" that the primary reason for the massive growth rates achieved by South Korea was that it followed highly protectionist trade policies with almost all imports being subject to strict licensing. This was

basically done to foster the growth of Korean manufacturing industries. Korea identified the fact that in order to compete with world class producers, they will have to import the best state-of-the-art equipment from abroad and set up their own manufacturing units of final products. So they initially allowed imports of only intermediate products which helped in further production. But gradually when they saw that the Korean industries were capable of manufacturing the machines and equipment as well, they raised import tariffs on intermediate products as well. (Panagaria) compares this approach of South Korea with that of India and argues that India as opposed to Korea followed such a strict import substituting policy prior to its 1991 reforms that it even manufactured its own machinery. Korean economic reforms not only lead to rapid growth but also a gradual elimination of abject poverty and unemployment. (Kim, 1991) divides the Korean reforms into 3 phases, the first phase of reforms occurred between 1954-1960 and were majorly focused towards import substitution. The second phase was marked by outward oriented policies which took place in 1961 to 1979. The third and the final phase was the post 1980s period wherein the policies

aimed at achieving greater balance and stabilization. (Noland, 2005) mentions that the most prominent feature of South Korea's economy was the presence of Chaebols which are giant industrial houses primarily dominated by families (system akin to Hindu Undivided Family in India). These Chaebols were given the necessary resources by the government if they proved their metal at optimal production with enormous capacity to export. The Korean reforms were focused on giving greater autonomy to the state because they believed that the government could only allocate resources effectively among the various players in the economy and since the state developed and executed the economic policies it should indeed be given greater autonomy. But according to (Lee, 2005) along with state autonomy under General Park's dictatorship, cooperation between Chaebols and the government was also seen to quite an extent. They worked in a collaborative manner in order to achieve effective industrialization. (Lee, 2005) has given a very good account of the financial policy undertaken by General Park to boost export-oriented growth. There were two most important policy moves made in the financial sector, a) financial sector was managed by the state so as to provide

preferential treatment to Chaebols to boost domestic production as well as exports and also to increase domestic savings, b) exchange rates were aggressively managed by the government to make exports more competitive. These reforms allowed for greater control of the state over allocation of funds to the preference industries. The government reduced the lending rates substantially to move a large bulk of money from the private markets to the banks and then they increased the interest rates on savings account. This policy became successful and the personal savings share increased from 2% of GDP in 1960 to 7% in 1970.

3. A brief account of events that led to the Indian Economic Reforms of 1991

The conservatism of the macroeconomic policies of India in the early 80s can be seen from the fact that the government primarily ran a fiscal surplus (its revenues exceeding its expenditure) in order to be able to finance the capital account deficit. But due to negligent fiscal policies the flourishing government revenues soon turned into deficits and the Indian government was forced to borrow (from abroad as well as at home) not just to finance its capital investments but also the mounting fiscal deficit. The primary sources of government

borrowing back then were multilateral lending institutions and government to government aid system. The former was majorly on concessional basis. But as the deficits deepened and situations commanded greater attention, the government also began borrowing from abroad on commercial basis. Sources involved the capital markets and the non-resident Indians (NRIs) (Srinivasan, 2003). The amount of external debt accruing to the private creditors (such as private banks and financial institutions, private bondholders, manufacturers, exporters etc.) grew five times in almost 7 years. In 1983-84 it was roughly 17% out of the \$22.8 billion external debt. The external debt itself tripled to \$69.3 billion at the onset of the macroeconomic crisis in 1990-91 (Srinivasan, 2003) out of which about 30% accrued to the private creditors. Since a fiscal deficit of such an extent was impossible to manage just by domestic and foreign lending, some portion of it had to be financed monetized (through printing currency). The 80's were marked by an annual average real GDP growth rate of 5.5% (sixth five-year plan) and 5.8% (seventh five-year plan) (Srinivasan, 2003).

3.1.The Macroeconomic and BOP crisis which led to the formation of 1991 reforms

By the 1990-91, India was in a trouble. It was functioning at an edge of fiscal insolvency as the gross fiscal deficit had mounted to 10% of GDP out of which 4.3% was only the interest payment component on domestic and foreign debt that the government had taken (Patel, 1992). The Gulf crisis of 1990, impacted India to a great extent. Oil prices rose sharply, leading to inflation in the economy and a consequent expectation for a rupee devaluation. Furthermore, India was also struck by a wave of political instability due to change in the Prime Minister twice within a year which led to a fall in the NRI's confidence in the Indian government's ability to manage the economy which prompted them to withdraw their funds from Indian banks (Srinivasan, 2003). India started defaulting on its short term external loan repayments causing its credit rating to decrease. This is when India approached the World Bank and the IMF for assistance and undertook what we know of as the 'Reforms of 1991'.

4. Reforms of 1991 - An Evolutionary Transition

Economic reforms in India were initiated with the main aim of aligning India to a steadier growth path with reduced poverty and greater opportunities for living a life that people have a reason to value. Although the roots of economic liberalization can be traced back to the late 1970s, the actual process of economic reforms began only in the mid 1991 as a consequence of a major macroeconomic and balance of payments crisis which prompted the need for a more robust development strategy in India. As already mentioned in the above paragraphs, in the 4 decades prior to the 1991 reforms, India followed a state-dominant static model of growth with import-substituting industrialization. This strategy gained a wide political popularity due to which there was not enough support for reforms before 1991.

4.1. Financial Sector Reforms

To understand the definition of “financial liberalization”, it is important to first know the features of “financial repression”. A repressed financial sector is the one which is characterized by (a) Extreme government interventions, (b) explicit control over interest rates by the government, (c) restrictions on private banks/financial

institutions to enter into the market, (d) nationalizing private institutions, (e) captivation of the domestic market for government debt, (f) restricting the transfer of assets abroad through capital control methods by the government (Sbrancia, 2011) (g) the loan market is often characterized by the problems of adverse selection and moral hazard due to their inability to separate defaulters from credit-worthy borrowers (Stiglitz, 1981). Financial liberalization on the other hand aims for the freedom of the domestic capital markets from government-generated distortions (Partha Ray, 2012)

4.1.1. Banks

Banking sector reforms primarily came from reports of 2 committees, both of which were under the chairmanship of M. Narasimham. The first report was the “Report of the Committee on Financial System” and the second report was the “Report of the Committee on Banking Sector Reforms”. The Committee 1 majorly advocated for the freedom of operation for the commercial banking sector, reduction in the Statutory Liquidity Ratio (SLR) and the Cash Reserve Ratio (CRR), de-regulation of interest rates, re-organization in the structure of the banking system leading to reduced number of public banks, setting up

of the Asset Reconstruction Fund (ARF), making RBI the apex regulatory body by removing the control of the Banking Division of the Ministry of Finance (Partha Ray, 2012) Committee 2 vouched for increase in the Capital Adequacy Ratio, adoption of professional corporate strategy by the banks and increase in the risk weights attached to the various securities (Partha Ray, 2012).

4.1.2. Development Financial Institutions

The Indian corporate sector has always looked up to the development financial institutions for long-term funds rather than commercial banks. What increased their confidence on FIs is the fact that they are not governed by lobbying practices or sponsorships, rather the primary role played by FIs is to reduce the financial constraints that are faced by corporates (Bhandari, 2003). As a consequence of reform measures, banks started entering the realm of long-term lending and FIs simultaneously ventured into short-term loan segment. This caused an increase in the supply of funds, in turn reducing the cost of borrowing by the companies. FIs were compelled to expand their services to include the likes of- merchant banking and stock broking. In fact, ICICI- a leading

financial institution was merged with its banking arm, ICICI bank to turn into a full-fledged bank.

4.1.3. Mutual Funds

Till 1963, UTI was the only mutual fund in India established by Government of India and Reserve Bank of India together. In 1987, non-UTI entered the market, set up by the Life Insurance Corporation (LIC) and General Insurance Corporation (GIC). But it was only in 1993, that private sector mutual funds were allowed.

4.1.4. Insurance

To look into the insurance sector reforms, the government had set up a committee with the then former RBI governor R.N. Malhotra as the chairman in 1993. The committee gave its proposal in 1994 to seek permission for the private sector to enter the insurance industry along with foreign companies, preferably in a joint venture. But, due to political restrictions the proposal came into force only in 2000 wherein the private sector was granted the permission to enter the insurance market with a 26% limit on foreign equity (Ahluwalia, 2002). Moreover, IRDA (Insurance Regulatory and Development Authority) was set up in April 2000 to

foresee the functioning of the insurance industry.

4.1.5. Financial Markets

The financial market is sub-divided into different markets such as- money, forex, credit, equity and bonds (G-sec and corporate). A notable point about the Indian financial sector is that there are several sources of funds available to the corporate sector after the implementation of the reforms such as banks, non-banks, and domestic sources, foreign sources (FDI, ADR, and FII etc.). Out of the total flow of resources to the corporate sector in 2009-10, about 55% were from financial institutions and around 20% were from foreign sources.

4.1.6. Capital Account Liberalization

India's capital account convertibility has been a slow and gradual process which is treated as an ongoing process rather than a one-time event (RBI, Report on Currency and Finance, 2004). The framework for capital account convertibility was laid down in The Report of the S.S. Tarapore Committee. The 3 major milestones to reach an optimal level of CAC are- Reduction in the rate of inflation, Reduction in the Non-Performing Assets of the banks, Reduction of fiscal deficit of the

government. When The Report of the S.S. Tarapore Committee was being evaluated to track the progress of CAC in 2006, it was found that out of the 3 major milestones mentioned above, the first two have been reached to an extent while the third one is still a distant achievement.

4.1.7. The status of the current and the capital account in India.

India has managed to maintain a current account deficit within a 2-3 % range. Capital account in India is increasingly financed by FDI and portfolio investments which although decreased during the global crisis of 2008-09, started increasing thereafter and reached US\$ 53.6 billion mark in 2009-10. Furthermore, the process of gradualism towards full capital account convertibility is seen from the increase in India's outward flow of FDI since 2005. The amount of US dollars that can be freely remitted in a financial year under the Liberalized Remittance Scheme for the purpose of any current or capital account transaction is USD 125,000 (RBI, Forex Facilities for Residents (Individuals), 2014). As per the recent revisions, the investment limit for foreign institutional investors have been increased up to \$15 billion in government securities and \$20

billion in corporate bonds, encouraging more inflow of capital in India.

5. Impact of the Financial Sector Reforms in India

5.1.Fiscal Consolidation, Public Savings and Investment

Since excessive fiscal outflow was seen as the major cause for the BOP crisis in 1991, fiscal consolidation measures were the most highly regarded reforms. But it will be clear from the following description that the objective of this fiscal consolidation was not achieved in the post reform period. The Central government's fiscal deficit saw a dip in 1996 to 4.1% of GDP from a high of 6.6% in 1990-91 but again rose to 6.1% in 2001-02. Similarly, the gross fiscal deficit of the states experienced a dip in 1993-94 to 2.4% from a high of 3.3% of GDP in 1990-91 but sharply rose to 4.6% in 2001-02. The consolidated fiscal deficit of the centre and the state was as high as 9.4% of GDP in 1990-91 but successfully came down to 7% in 1991-92 continuing at this rate till 1993 only to hike up to 9.6% in 2000-2001. Some of the major reasons for not meeting the fiscal consolidation targets have been, excessive subsidies given out by the central government on food and fertilizers which accounted for about 1.8% of GDP in 2002-

03. It has been proposed that the reduction in food subsidy would require a complete reformation of the Public Distribution System, PDS as well as the functioning of FCI but so far the progress in achieving these reforms have been minimal. Moreover, the tax and expenditure reforms in India have been quite dis-satisfactory. Although the share of direct taxes (personal income tax, corporate tax etc.) almost doubled from 1.9% in 1990-91 to 3.7% in 2002-03 but the government's total tax revenue only increased by 0.4% (from 15.4% in 1990-91 to 15.8% in 2002-03) (Srinivasan, 2003). This tells us that India needs a restructuring of the tax regime by implementing GST which is still in process. Along with the objective of fiscal consolidation, government also aimed at achieving improvement in the level of public savings which is defined as the government tax revenue in excess of public expenditure. A good amount of public savings is required in the economy so as to facilitate public investment without crowding out private sector investments. But unfortunately, this aim was never achieved. In fact, public savings deteriorated from +1.7% in 1996-97 to -1.7% in 2000-01. India has achieved a 6% rate of growth in the post reform period with

an average rate of investment of 23% of GDP. But in order for India to achieve an 8% growth rate target, the rate of investment will have to be at least 30% of GDP vis-à-vis the East Asian standard of 36-38% investment rate for achieving growth rates of this magnitude. Subsequently, India will have to focus on increasing its foreign direct investment to at least 2% of GDP, which is a rather optimistic figure, and also its domestic savings. In conclusion it can be said that, fiscal instability has crippled the ability of the centre and the state to pursue public investment and on top of that, high government debt has led to crowding out of private investment. Thus, unless the problem of fiscal failure is addressed, it is difficult to realize the true potential effects of the reform measures. The 8% growth target will become a distant dream as it will be difficult to maintain the 6% growth rate which was experienced in the first 10 years after the reforms.

5.2.Industrial Policy Reforms

The industrial policy in the pre-reform period deprived all types of private investments and the areas where private investors could operate were also limited by various control measures. This kind of a restrictive industrial policy lead to a very

inefficient industrial structure which had to be backed by an array of protective policies. The cost imposed by these protective trade policies were carefully studied by economists and by 1991, they reached a consensus to liberalize the industrial sector and welcome greater openness.

5.2.1. De-licensing of industrial controls

July 1991 saw the removal of industrial licensing for all except 18 industries namely, iron and steel, telecommunication, plant and machinery, mining, minerals, aviation, electricity, oil etc. By 2000-01, number of industries reserved solely for the public sector reduced to just three- Railways, Atomic energy and Defense equipment. Licensing is now needed for industries which are into manufacturing of environmentally hazardous substances. In the pre-1991 period, investments made by large private industries were required to get a separate clearance sanctioned under the MRTP Act (Monopolies and Restrictive Trade Practices) of 1969. This act's main purpose was to prevent concentration of economic power in the hands of few common people and also to restrict formation of anti-competitive monopolies. The MRTP Act was amended in 1991-92 and was later replaced with a more comprehensive Company's Act under the Competition Bill which was introduced in the

parliament in 2001. There were 800 odd products which were reserved for production only by small-scale industries (SSI). In order to abolish these reservations, government had appointed two committees. The Abid Hussain Committee (1997) and Prime Minister's Economic Advisory Council (2001). Both these committees were in favour of abolishing the reservation of products for production by SSI. But Planning Commission's Committee of 1999 was of the view that retention of these reservations would foster the growth of small scale industries thereby neglecting the fact that those industries which exhibit economies of scale would be at loss because large firms were excluded from entering the market so the scale economies would never be achieved. Also, those industries which have great export potential would lose out on competitiveness in the international markets which brings us to the conclusion that sooner the reservations are abolished as recommended by the Hussain Committee better it will be for the Indian Industrial environment. But according to the statistics, only 88 products were de-reserved until 2002 (Srinivasan, 2003).

5.3.Trade and Exchange Rate Policy Reforms

In the pre-reforms period, India followed a very protectionist trade policy which constituted, high tariff rates along with severe import restrictions. When it came to manufactured consumer goods, their imports were strictly prohibited. Imports were restricted for all the products for which domestic substitutes were available. So the major aim of the trade policy reforms was to abolish import licensing and to bring down import duties.

5.3.1. Abolishing of Import Licensing

Import licensing was originally given impetus because the government felt that it was necessary to manage the BOP account. But after the government switched to a flexible exchange rate system, it realized that any discrepancy in the BOP account can be managed through the flexibility of exchange rates. So for capital goods and intermediate goods, EXIM policy withdrew import licensing in 1993 itself and the goods could be imported freely. Also, removing Quantitative Restrictions on the above mentioned set of goods was fairly easy because the number of domestic producers producing these goods were small and moreover, they welcomed competition in this segment. However,

removal of QRs on consumer goods was a daunting task because that would affect a large number of domestic producers and that too small scale producers since a lot of consumer goods were reserved for production majorly for SSI. It was not until 2001 that the QRs were completely removed following a lost WTO dispute against USA on QRs. Quantitative restrictions were removed on only 714 items by 2000, the remaining 715 items were liberalized only by April 2001 (Banga & Das, 2012). Thus, QRs were totally removed only after a decade of economic reforms of 1991.

5.3.2. Reduction in Tariff Protection

Although the 1991 reforms brought about significant changes in the tariff structure of the Indian trade policy, the reforms in this sector were characterized by non-uniformity and selective protectionism. Consumer goods were still under stiff governmental control insulating it from competition from the external sector. From the point of view of simple averages, the industrial tariffs for all manufactured products were as high as 82% in 1990 which were brought down to 33% by 1999 and were further reduced to 9.43% by 2009. If seen from the weighted average point of view, the tariffs which were nearly 50% in

1990, reduced to 29% in 1999 and further to 7% in 2009. Peak tariffs were also reduced from 200% in 1990 to 30% in 2001. Consumer goods were slowest in experiencing tariff protection declines followed by raw materials & intermediate goods which then was followed by capital goods. Indian tariff rates are very high as compared to their East Asian counterparts. Efforts are being constantly made to bring down the Indian tariffs close to the East Asian levels. In 2000, China stood at a weighted average tariff rate of 14.7%, Malaysia at 6%, Thailand at 10.1% and Indonesia at 5.2% (Srinivasan, 2003). Thus, it can be clearly seen that there is still a huge gap between India's weighted average tariff rates and that of its Asian neighbours.

5.3.3. Indian's Export Promotion Stance

In the 1991 reforms, export promotion schemes undertaken by the government focused on giving more incentives to the exporters to encourage them to export in higher quantities. These incentives included- allowing the exporters to retain a certain proportion of their foreign exchange earnings, exemption from payment of tax on goods produced for the purpose of exports, various benefits in the form of subsidies etc. (Banga & Das, 2012). India

also tried to replicate the Chinese model of setting up Special Economic Zones (SEZs) so that export production could take place in a more conducive environment (Srinivasan, 2003). India had already created an Export Processing Zone (EPZ) in Kandla (Gujarat) in 1978 but the main function it performed was to give duty-exemptions on imports. Therefore, it did not prove to be much of a success in the Indian scenario because in order to be truly internationally competitive, more than removing barriers such as corruption and bureaucracy, it is important to have a proper physical infrastructure and human capital in place. Without the later, EPZs and SEZs are a mere attraction without much potential in fostering exports. In fact, T.N Srinivasan in his paper “Indian Economic Reforms: A Stocktaking” gives an argument against SEZs saying that if the country’s infrastructure as a whole is made better and every industry functions with an export mind-set, we do not even need SEZs.

5.4.Liberalization of Trade in Manufactured Goods

As mentioned in the above paragraphs, tariff liberalization was a very gradual process wherein it took India almost two decades to substantially reduce the tariff rates and it was only in the year 2001 that

the Quantitative Restrictions were completely removed. So, amidst high protectionism and barriers to trade, real exports and imports of manufactures showed a faster growth in 2000s. Where real exports grew at an average annual rate of 10.2% in 2000-2009, real imports grew at an average annual rate of 13.3%. Manufactured goods broadly comprise of- Raw materials, Intermediate goods, Consumer goods and Capital goods. Decomposing India’s imports of manufacturers we find that, India’s imports of manufactures were predominantly dominated by the imports of raw materials and intermediate goods, constituting 35% and 28% of the total imports respectively in 1990. By 2000, raw materials and intermediate goods together comprised of 70% of the total imports while the proportion of capital goods and consumer goods stood at only 15% each. Owing to removal of quantitative restrictions and other import incentives, the share of capital goods did increase slightly from 20% in 2003 to 22% in 2009 but did not achieve its true potential. Decomposing India’s exports of Manufacturers, we find that- The trend of exports in the manufacturing sector has continued from 1988 to 2009. Intermediate goods and consumer durable goods have

dominated manufacturing exports in India throughout, constituting about 43% and 35% of the total manufacturing exports respectively in 1988. In 2009, the proportion of exports of consumer durables increased to 45% and that of intermediate goods declined to 32% but these two goods still dominated the exports of capital goods (which increased from 6% in 1988 to 13% in 2009) and raw materials. From the above description, it can be seen that the results of reform policies were seen only after a lag of 10 years. For instance, 1980 trade reforms resulted in higher growth of real exports and imports of manufactured goods which was visible only in 1990s. When protectionism was reduced in 2000, the results were however seen post 2008 wherein imports grew at a higher rate than exports of manufactured commodities. One of the points which is worth highlighting is the shift in the composition of India's export and imports from 1970s to 2009. The 1970s period was characterized by exports of-textile products, leather, basic metals and food and beverages. But with time share of these products as a proportion of total exports declined. By 2009, the export basket primarily consisted of- chemical products, petroleum products, motor vehicles, electrical machines and apparels

(Source: World Integrated Trade Solutions, UNCTAD).

5.5.Manufacturing Growth in India- Structural Breaks

Growth in the Indian manufacturing sector has touched its peak in the 2000s. Although there was a slight downfall in the growth levels after the global crisis of 2008, but the recovery was quite steady in the post crisis period of 2009-10 and 2010-11 which saw the growth levels reaching beyond 8%. In order to track down the growth path of the manufacturing sector in India it is crucial to first understand that India's manufacturing sector is divided into two sub-sectors, the unorganized sector and the organized sector. Originally, the unorganized sector was more predominant than the organized sector, but gradually, the share of value added of the unorganized sector declined from a high of 59% in 1950 to as low as 32% in 2008. In fact, in the post-reforms period, the organized sector has picked up its pace and has shown higher growth levels than the unorganized sector.

5.6.Manufacturing growth in India- Export-Led/Import-Induced?

This is a very important question with regards to the growth of the Indian Manufacturing sector. In this era of extreme

volatility and market upheavals, it is essential to know whether growth in exports/imports are the cause for growth in the manufacturing sector or is it vice-versa, as such an insight would be extremely helpful in devising future economic policies. Export-Led growth is a phenomenon which is based on the Keynesian Theory which says that demand is the driver of economic growth. Excess demand in the economy is adjusted by an increased supply of output in future time periods. This theory is opposite to the “Say’s Law” which contends that supply is the primary variable and creates its own demand. It is generally argued that developing countries face a constant problem of lack of domestic demand due to which their manufacturing sector growth levels are sub-optimal. Consequently, in order to increase the sector’s growth levels, it is important to induce more demand which is satisfied by external sources (exports). Empirical evidence has been found to support the theory of export-led growth in cases of Asian countries like China, South Korea, Japan and Hong-Kong. However, a question to be asked at this point is that, if the country’s manufacturing sector depends too much on external demand and less on domestically-induced

demand, then in times of global economic crisis and slowdown in consumer demand, the country’s manufacturing sector will suffer unprecedented shocks. As a result, export-led growth theory has come to be criticized off late on account of the Asian financial crisis of 1997 and the housing crisis of 2008. Economists also vouch for import-induced growth. Their argument is that, imports of raw materials and intermediate goods lead to higher productivity gains due to increased domestic varieties. Moreover, import of consumer goods cause competition in the domestic market forcing the domestic industries to be more efficient and abreast with new innovative technologies so as to survive amidst high competition in turn leading to greater productivity and growth (Grossman & Helpman, 1991). Also, Romer’s endogenous growth models very well describe the static and dynamic gains which are determined from imports.

Now, in order to determine whether India’s manufacturing sector growth is attributable to export-led growth or import-induced growth we first need to look into the economic scenario in the post 1991 period. As mentioned in the previous sections, imports as well as exports of manufacturers both have increased tremendously with

imports leading exports by 3.1% between 2000 and 2009. Along with this hike in the two-way trade, the annual average growth rate of the manufacturing sector was itself very high. It is compelling to say at this point that it was perhaps trade which led to the high growth rates in the sector but an even more compelling argument comes from the fact that this particular time period also experienced a very high growth of real per capita income which increased from 3.2% (1980s) to 5.6% (2000s) which further leads to high domestic demand and consequent purchasing power. Thus, it cannot be said with confidence as to what exactly caused high growth in the manufacturing sector, was it the upsurge in exports or increase in domestic demand, unless we look at the regression results given out by various economists. In case of India, to assess the impact of liberalization policies on the manufacturing sector growth rates, different approaches have been tried one of them being the co-integration analysis and the other being VAR modelling, wherein long term and short term relationship as well as causality between export/import growth and manufacturing sector growth is evaluated. In a particular study conducted by Rashmi Banga and Abhijit Das, an augmented

production function approach is adopted wherein two functions are taken-

Real output = f (labour, capital stock, real exports and real imports)

And

Real output net of exports = f (labour, capital stock, real exports and real imports)

The results of the Vector Error Correction Mechanism show that there is a presence of a co-integrating vector such that

Ho: No co-integration can be rejected for both the equations. Implies that there exists a long term relationship between the variables in question. Thus, any discrepancy between the dependent and the independent variable in the short run will be corrected to cause a stable relationship in the long run since the coefficient of the error correction term is negative and statistically significant. Surprisingly it was also seen that the coefficient of the export variable in both the equations was statistically insignificant while the coefficient of the import variable was statistically significant implying that exports in the long run may not impact the real output significantly but imports do impact real output in the long run. VAR model was used to check for granger non-causality. The results displayed that the “Ho: exports do not

granger cause output” was accepted due to insignificant test statistic while “Ha: output does not cause exports” was rejected. This implies that output growth cause export growth and not vice-versa. A more interesting result that came out was a bilateral causality between imports and exports implying that higher exports lead to higher imports and also vice-versa. The fact that exports do not affect manufacturing output but is affected by imports tell us that there is a missing link between exportable goods and domestic output (Banga & Das, 2012). All of the above interpretations imply that growth in the manufacturing sector in 2000s in the Indian context cannot be attributed to export-led growth and may not be even in future. However, import growth was seen to have a significant effect on output growth. In India tariff rates were reduced early on for capital goods and intermediate goods and by 2000, tariffs were reduced even for consumer goods. This allowed for greater imports of high technology goods and better quality intermediate goods and raw materials leading to productivity gains in the manufacturing sector. In conclusion, the results from Granger causality imply that the growth of the manufacturing sector is commensurate with the growth in domestic

demand owing to increase in the per capita income levels and not commensurate with the growth in exports in the long run. The results of VECM model tell us that manufacturing output is affected by imports with one period lag and by per capita income with two period lags while exports do not have an impact at all even with a lag of two periods. A plausible argument for exports not playing a significant role in growth of manufacturing output is that, the share of exports as a percentage of total manufacturing output is very minimal (25% at current prices and only 16% in real terms in 2008-09) leading to the view that the major portion of the manufacturing output still caters to only the domestic market (Banga & Das, 2012). Another argument for exports not playing a significant role can be given by comparing India’s share of world exports with that of China. India’s share of world exports rose very slightly from 0.5% in 1993 to only 0.8% in 2002 (Source: 2002 International Trade Statistics Year Book: United Nations 2004.). Whereas if we see the statistics of China, it is not surprising that China’s world share increased from 1.2% in 1983 to 5.1% in 2002 (WTO, 2003). Another statistical inference that points to India’s sub optimal performance in world exports is seen from the share of

labour-intensive commodities in American and European imports where India and China had considerable comparative advantage. According to T.N Srinivasan, China's share in American imports increased from 12% in 1990 to a whopping 227% by 1999. While on the other side, India's share fluctuated around 1% with no trend and in case of Europe, China's share fluctuated around 3% while India's share around 0.8%. These statistics reveal that India has not been able to tap the foreign markets to its true potential as a result it has also failed to reap full growth enhancing effects from exports.

5.7.Liberalization of Trade in Services & Foreign Direct Investment

Originally, the public sector was the heart of the Indian economy with their presence in almost all the industries ranging from insurance to banking to telecommunication. But since 1991, as a consequence of liberalization in the services sector, the power has been decentralized to allow for greater private sector and foreign investors participation. The insurance sector which was a state monopoly was given access to the private players and foreign investors on December 7, 1999 when the IRDA Bill was passed by the parliament. The Bill allowed 26% foreign investment after a license

seeking permission was obtained. Even the banking sector was liberalized, permitting 74% of FDI and giving permission for 12 branches of foreign banks annually under WTO Financial Services Agreement (Panagariya, 2004). The current policy framework governing the telecommunication sector in India is the New Telecom Policy which was adopted in 1999 and takes its roots from the National Telecommunication Policy formed in 1994. 49% of FDI is allowed in this sector and beyond that needs to be approved by the government.

The acceleration of growth in the Indian services sector can be attributed to growth in services like communication, software, business and financial and community services owing to private sector participation. Growth rate in the services sector was 6.9% in 1980s which increased to 8.1% in 1990s (Panagariya, 2004).

Moreover, there has been a spectacular surge in India's services exports, from \$4.6 billion in 1990 to \$20.3 billion in 2001 majorly due to a tremendous increase in software exports from \$0.3 billion in 1993 to \$7.2 billion in 2001 (Srinivasan, 2003) and to as high as \$55.46 billion in 2010-11 (Source: Ministry of Commerce and Industry, GOI) For a developing country,

Foreign Direct Investments are the most stable form of long-term capital flows. Although India has substantially relaxed restrictions on all kinds of foreign capital flows like FDI and FIIs, it still is not a much preferred destination for foreign countries to park their funds. India's peak share in the world FDI was just 2% in 1997 while on the contrary, China grabbed 34% share in FDI in 1990s. India's Private debt flows were better than its FDI flows. Even the small Southeast Asian countries like Thailand, Malaysia and Indonesia attracted more capital flows than India until their currency crisis but managed to bounce back successfully to continue to attract more capital flows than India. Three factors can be held responsible for India's inability to attract considerable foreign investment despite of clear intentions to liberalize this sector- First being the hard fact that strong regulations have still not done away with even after reforms. Second, domestic industries perceive FDI as a threat to their existence thus displaying strong resistance towards them. Third, India's physical and legal infrastructure is not very favourable to be attractive to private foreign investors.

5.8.Reforms in Enterprise Restructuring

5.8.1. Disinvestment and Privatization

Public Sector Units disinvestment of equity started in December 1991 but the pace of disinvestment during the initial phases of reforms was very disappointing with only 35% of the target of INR 78,300 realized. Initially, disinvestment of petroleum giants BPCL and HPCL was postponed and proposals for disinvestment of aviation enterprises Air India and Indian Airlines was abandoned. This led to resentment among large scale enterprises. Privatization was also a big challenge in those times since the workers were less confident about getting an equal employment opportunity in the rapidly changing environment for privatization. But recently, it has been observed that privatization has become a routine activity. For example- sale of equity in VSNL and Maruti Udyog Limited to private investors has substantially changed the scenario. Some 17 companies have been privatized by the government bringing the Indian government \$2 billion.

5.9.Social Sector Reforms in India- Health and Education

Social indicators of an economy set the stage for its economic growth. India's social indicators lagged behind its Southeast

Asian counterparts so much so that the 52% adult literacy ratio in India was comparable to 57% and 59% in Indonesia and Thailand respectively in 1971. In the post reform period, the central government's expenditure on social indicators as a percentage of total expenditure increased from 7.6% in 1990 to 10.2% in 2000 which was only 1.58% of GDP (Dev & Moolji, 2002). If we look at the data on expenditure on social sector as a percentage of GDP by the centre and the state, it is easily seen that the states' expenditure has reduced overtime and that of centre and state taken together has remained constant. The primary healthcare system in India has been equally problematic. The problem is to ensure that the underprivileged sections of the society are able to access and receive the necessary healthcare services at affordable prices. NSSO data reveals that the high costs of healthcare are becoming a hindrance in making the service available to not only the poor but also the middle income population.

6. The South Korean Reforms (1962-1980)

South Korea's economic development following its reform period has been no less than spectacular. The growth experience of this particular country is often termed as a "Miracle". Five decades back, South Korean economy like any other backward economy was characterized by poverty, lack of natural resources (unlike its northern counterpart), traditionalism, and feudalism. It was deeply dependent on subsistence farming, the proportion of cultivable land being only 30%. But the transformation through which the Korean economy underwent following their reforms is something which even the industrially developed countries took almost about a century to reach¹. In 1954, Korea's GDP was \$1.5 billion and the per capita GDP was only \$70 (HEO, JEON, KIM, & KIM, 2008), with such low levels of income, there was no question of domestic savings at all. Moreover, the dependence on foreign aid was dramatic for Korea since its population density was very high and the growth rate of population was about 3% per annum.

¹ Agriculture's share in GDP decreased from 44.6% to 13.5% from 1954 to 1986 (Kim, 1991). A rapid change in the structure of foreign trade was very clearly visible. The share of exports as a percentage of GDP increased from a mere 3.15% in 1960 to 30.18% in

1980 further to 35.48% in 1987((WDI). The share of manufacturers as a percentage of merchandise exports increased from 18.2% in 1962 to 89.5% in 1980 and further to 93.5% in 1990.

More than 40% of the population was under abject poverty. After the Korean War which lasted three years from 1950 to 1953, the recovery in the first decade after the war was extremely slow and the country relied on financial aid from the USA for survival. But after three decades, Korea's GDP per capita (PPP) at current prices rose to \$8,619 in 1990 and further to \$18,123 in 2000. The unemployment levels fell from 5% in 1980 to 2.5% in 1990 (WDI). Also, trade as a percentage of GDP increased from 15.75% in 1960 to 67.81% in 1980. This made Korea rank among the 12th largest trading nation in the world and a country which would soon be stepping into the category of modern industrialized nations. The growth strategy adopted by Korea which displayed an outward-oriented approach seemed to serve well for the country leading to tremendous growth as well as a gradual reduction in absolute poverty².

The policy evolution that took place in Korea can be divide into 3 phases.

- i. 1954 to 1960 – The import substitution Policy phase
- ii. 1961 to 1979 – Policies supporting outward orientation

- iii. Post 1980 – The balancing and stabilizing phase

1954 to 1960 – First Phase

The first phase was characterized by import substituting policies as an attempt to revive the economy after the war. But these policies did not lead to very successful outcomes and the growth performance was not satisfactory. However, one parameter which was given due importance to in this phase was the creation of physical and human capital infrastructure which set a foundation for further industrial development to take place in Korea.

1961 to 1979 – Second Phase

The second phase followed an outward oriented approach of export-led industrialization under the dictatorship of General Park Chung-hee. The products that were produced in the first phase of import substitution had already saturated the Korean markets and it was about time the economy adopted a market-oriented approach under neo-mercantilist state intervention. The state was assigned the role of allocating the country's resources

² The proportion of poor people in the total population reduced from 40.9% in 1965 to 5.1% in 1987 (Kim, 1991). Also, land reforms which took place in 1949, paved the way for a more equal growth. The statistics

show that the proportion of tenant farmers out of total farm households decreased by 42% in 1947 to just 5% in 1964 and at the same time, tiller-owner's percentage increased to 72% from 16.5% (Kim, 1991).

optimally to enhance the productivity of the private sector.

7. Static Approach to Economic Development

The South Korean development strategy was that of a government-led approach, known as the static approach. Incentives in an economy which lead to policy changes also lead to new growth patterns and as a result different set of winners and losers. This is the reason as to why there is an increasing importance of government autonomy. But having said that, it is also important in an economy that the state's autonomy is in co-operation with the prime industrial forces (drivers of growth) for example the Chaebols in the case of South Korea. This is because while the government's interest is in implementing effective policies, the industrial forces are often looking for ways to tweak the government devised policies in order to get their interests fulfilled. It was also important to have such a collaboration between the state and the industrial forces in Korea so as to address the question of lack of political validity of the authoritarian government. Whatever benefits of policy success was reaped in Korea was shared among the Chaebols to maintain peace and stability.

8. Policy Framework for Export-oriented Industrialization

The Korean definition for international trade defies the conventional argument for indulging in international trade which refers to trade on the basis of comparative advantage. In essence, a labour-intensive country would benefit from international trade if it produces and exports labour-intensive goods. But the case for Korea was a little different. Policymakers under the administration of President Park tried to incorporate the lessons learned from Japan's experience and thought that in order to foster Korea's future development it's important to first put in place a solid industrial base which would not be confined to only those goods in which Korea had a comparative advantage but a vast variety of other goods as well. In order to do this, only those few sectors were allowed to operate in the market which were expected to be able to compete on the international platform. These firms were given all the incentives that they would require to produce efficiently.

The entire Korean model is built on the concept of economies of scale. Per unit cost of the domestic output depends on the volume of the domestic output. If the industry exhibits increasing returns to scale,

per unit cost will reduce as the volume of the output is increased. Thus leading to greater productivity and hence greater international competitiveness as shown in the third and the forth box respectively. This becomes a cycle in the sense that, more a country exports on the basis of its productiveness, easier it is to sell. It is also argued by a number of economists that the Korean industrialization model was based on correct pricing and realistic exchange rate policies (Krueger, 1978). But this argument is responsible for only a part of Korea's success as White and Wade's argument suggests that the major aim of the Korean government was to liberalize the industrial sector to make Korea gain greater competitiveness in the world markets. In the year 1962, the Korean government came up with the first five-year development plan with the main aim of setting a foundation for the export-oriented industrialization policy which was to come later. Focus was given to first becoming more independent by reducing dependency on US aid and then working towards making better the social and economic infrastructure. It was only in the second five-year plan in 1967 that the Korean government adopted the objective of increasing exports. Before the 1960 reforms, the Korean industrial structure was

dominated by the agriculture industry which comprised about 40-50% of the total structural base. Manufacturing was the second industry accounting for about 10-20%. But after the reforms, both these sectors balanced out comprising 30% of the industrial structure each. Since the Korean government was completely ripped off after the war, there were very little domestic savings. But in order to foster industrial growth it was important to channelize capital from the private money markets to the banks and in order to do that, the government had to incentivize the domestic households to save more by increasing the interest rates of the savings account. In 1960s, savings as a percentage of GDP was only 2% while as a result of interest rate policy, the savings share of GDP increased to 7% (HEO, JEON, KIM, & KIM, 2008). The exchange rates in Korea were extensively managed by the government. They were purposely kept devalued so as to boost exports.

9. Trade Policy Reforms

9.1.Exports

Various incentives were provided to the exporters to boost exports, for example, reduced income tax for corporate and private income, exemption of customs duty

on goods imported for export purpose, creation of reserve funds, loans from foreign countries to finance exports on long-term credit, different treatment was given to different exporters on the basis of their performance, etc. One of the very important policy was that of excess depreciation allowance. According to this policy, the manufacturing units which were earning their revenues in foreign exchange to the tune of more than 50%, were allowed to deduct an extra 30% depreciation of the existing rate of depreciation from their taxable income, hence reducing the amount of tax paid by them. The most important step taken in the attempt to boost exports was to provide credit to the export houses at a subsidized rate of interest. The interest rate charged to a commercial business in 1965 was 26% while that charged to an export-oriented enterprise was just 6.5%. The Korean government followed a policy of supporting the very large firms which exhibited more efficiency due to their scale effects and had a better world market reach, as opposed to small and medium sized firms. The export growth in Korea has been

phenomenal. From mere 3.15% of GDP in 1960 to 28.6% in 1977 and further to 35% of GDP in 1987. From 1962 to 1982, exports grew at an average rate of 30% annually touching peaks of 50% in some years³. The value of annual export surged from about \$33 million in 1962 to a peak of \$21 billion in 1982.

Changing phase in the export industry-

By the late 1970s, due to a deficient supply of skilled labour along with General Park's decision to remove the wage ceiling led to an unprecedented increase in the per unit labour costs more than any other Asian exporting country. The rate of increase in the labour costs per annum had risen to levels of 17.5% in Korea⁴. This led to a fall in the exports of light industrial goods such as textiles which earlier made up to 40% of the total exports and a surge in heavy industrial products like steel, iron, ships etc. What must also be noted is that, during this period Korea also faced a worsening of its terms of trade due to increase in the cost of imported raw materials, fuel and capital goods due to an upsurge in protectionist policies in the developed countries. This

³ It is important to note that, along with exports, imports also grew, in the time period mentioned above, imports grew at an average annual rate of growth of 20% which is although less than exports but quite relevant. For Korea, imports were as important as exports as they fuelled the export

industry because major imports were of raw materials and intermediate goods that generated the production of export goods.

⁴ Annual increase in per unit labor costs was only 0.85% in Hong Kong and 7.2% in Taiwan (Kim, 1991).

caused difficulty in Korea being able to command a similar price for its manufacturers which it earlier could. So it had to sell more to gain a bit more. By this time, Korea realized that the era of low cost labour force was about to come to an end and would not come back in the future. Even if it did, export growth driven by labour-intensive exports would not be optimal on accounting of trade restrictions imposed by developing countries on labour-intensive products. This prompted Korea to switch its export pattern to that of high-technology products if they were to continue their high export growth rates. The immediate response to this realization was to liberalize the foreign investment policies so as to attract high amounts of capital inflows and technology transfers from advanced countries abroad.

9.2.Imports

The import policy of the Korean government was very stringent. Only those items that existed in the positive list could be imported and these items were as mentioned earlier raw materials, capital and intermediate goods used in the production of export-oriented

goods. The Korean government in the 1960s was liberal on only essential imports while those goods which were seen to considerably hamper the domestic industries were strictly prohibited. In mid 1970s, the Korean government sought to build the domestic industrial base of heavy machinery and capital goods industry to further reduce Korea's dependency on imports in the long run, however this initially caused an upsurge in the amount of importable in the short run⁵. Proportion of consumer goods out of the total imports was only 3%. In order to further boost the domestic industries' indulgence in producing heavy machinery and capital goods, the government came up with a scheme according to which those industries which were using domestically produced machinery were given 10% tax rebate. In conclusion it can be said that, Korean trade policy is not a kind of policy which reflects a traditional economics textbook approach because it was a combination of export-promotion as well as import-substitution in a highly calculative environment.

⁵ In 1980s, Korea started generating a current account surplus against the United States, owing to this, the government decided to take a relatively liberal stance on the import policy in the post 1980 period. The tariff rates were reduced from 24% in 1983 to 18% by 1988

(Bank of Korea). Although the tariff rates were reduced, they were still high from the international standards. Korea continued to follow a cautious strategy throughout.

10. Financial Policy Reforms in Korea

In Korea, the Ministry of Finance is the topmost governing body which regulates and foresees the functions of all the banks including the apex bank (The Bank of Korea). However, the Economic Planning Bureau is the financial body which is responsible for implementing policies for the entire country. In order to implement policy loans, the EPB, set up development banks who were qualified to provide preferential loans at lower cost than commercial loans to priority sectors and industries. Like every other policy, the policy of “preferential loans” also came with its own dark side. While on one hand, without this policy, it was next to impossible to develop an industrial base in South Korea (whether that of light manufacturing or heavy manufacturing), on the other hand, the small scale enterprises were absolutely neglected and lacked encouragement from the government. Also, the debt-equity ratio of the large conglomerates (Chaebols) which were given access to cheap loans from the banks shot up to unmanageable rates and hampered their profitability because now they were burdened with excessive interest payments. Till 1980s, the government could not deregulate the interest rates due to

opposition by the Chaebols as they feared that interest rate deregulation will increase their already skyrocketing interest burden. But, in the 1990s, the government decided to liberalize the financial sector and invite competition from private financial institutions to increase efficiency in the markets. For this, restrictions on the Chaebols on ownership of Non-Bank Financial Institutions (NBFI) was removed, allowing Chaebols to own and operate NBFIs like Life Insurance Co. and investment trust companies (Lee, 2005).

11. Empirical Analysis

11.1. Model 1

We know that when India and Korea having similar set of initial economic conditions were put through different sets of economic reforms, they took recourse to different growth paths. On one hand where Indian reforms followed a strategy of gradualism, Korean reforms were more extensive and rigorous. In order to validate this fact that the Korean reforms were much more profound and hence had a greater impact on the domestic product of the Korean economy as compared to the Indian reforms which had a relatively smaller impact on the Indian domestic product, my 1st model is a multivariate linear regression model where

GDP is regressed on four variables, namely Gross Capital Formation, Human Capital augmented Labour, Financial Reforms Index and Trade Reforms Index to ascertain the extent of impact of these variables on GDP of both the countries.

11.1.1. Hypothesis

The models for India and South Korea have been worked out on the basic premise that Economic reforms (when implemented properly), Human Capital Augmented Labour and Capital formation have a positive impact on a country's GDP and that Economic Reforms and Human Capital Augmented Labour have had a greater impact on the post reform Korean GDP as compared to that of Indian GDP.

The model is built on the modified version of the basic Cobb-Douglas production function:

$$Q_t = F(K_t, hL_t, R_t) \quad (1)$$

Where 'Q' is the quantity of output produced per period referred to as the Gross Domestic Product in time 't', 'K' refers to the Gross Capital Formation in a given time period, 'L' is the Total Labour Force, 'h' is the measure of productivity per labour, 'hL' together make the Total Human Capital Augmented Labour in the economy and 'R' represents the reform measures which are sub-divided into Trade reforms and

Financial reforms in a given time period.

The impact of Reforms on the Domestic product of an economy can be well justified.

Trade liberalization leads to reduction in the tariff and non-tariff barriers to trade as well as distorting domestic subsidies in turn increasing competition in the home markets.

The domestic exporters in the face of increased competition have to increase their productivities in order to survive in the market, which simultaneously leads to an increase in their output. This boosts growth and domestic output in the economy.

Financial reforms lead to reduction in the restrictions on the flow of capital to the private sector. It also leads to greater foreign investments which increases the pool of capital available to the domestic producers in turn increasing production in the economy. The effect of Human Capital Augmented Labour Force (hL) on domestic product can also be seen in a similar way.

As the human capital index in an economy increases, as a result of better healthcare facilities and improvement in the level of primary and secondary education, the labour force becomes more productive which has a positive impact on a country's level of production. Gross Capital Formation mainly comprises of additions to the fixed assets in an economy plus net

changes in the level of inventories (World Bank). It is taken to have a positive impact on the GDP since it leads to increase in the total factor productivity in the economy.

11.1.2. Methodology

In this section of the paper, an empirical model has been developed through a Multivariate Linear Regression Process to assess the impact of two major Economic Reforms (Trade Liberalization and Financial Sector Reforms), Human Capital Augmented Labour and Capital Formation on the Gross Domestic Products of the two countries in question, India and South Korea in their respective post-reform periods. The period of study chosen for India is 1992-2012 (21 years) since major economic reforms took place in India in 1991 and the time period chosen for South Korea is from 1980-2000 (21 years) because although the first wave of reforms was initiated in 1965, the final and more decisive wave of economic reforms occurred only in the late 1970s. The Correlogram test and the Augmented Dickey-Fuller (ADF) test has been conducted to check for the presence of unit roots as can be seen from *Table 1*. First Difference of the data series was taken to make the data stationary.

Working of the Model

Ordinary Least Squares is conducted on the sample data to analyse the functional relationship in the Cobb-Douglas production equation-

$Q_t = F(K_t, hL_t, R_t)$. OLS is conducted over a post-reform period of 21 years from 1992 to 2012 for India and from 1980 to 2000 for South Korea. To tackle the problem of non-stationarity, I followed the Correlogram approach. The ADF test consists of estimating the following regression-

$$\Delta Y_t = \beta_1 + \beta_2 t + \delta Y_{t-1} + \sum \alpha_i \Delta Y_{t-1} + \varepsilon_t \quad (2)$$

The ADF method includes the lagged values of the dependent variable ΔY_t . So that the problem of autocorrelation in the error terms can be dealt with. After conducting ADF test on all the variables in question for both India and Korea, it can be observed from *Table 2* that all the five variables are non-stationary at 10% level of significance for both India and Korea. The above table also shows that the variables are integrated of order 1 i.e. they are $I(1)$. Proceeding with OLS after all variables are $I(1)$ in the post reforms period. In order to ascertain the impact of Human Capital Augmented Labour (X_1), Gross Capital Formation (X_2), Financial Reforms Index (X_3) and Trade

Reforms Index (X_4) on Gross Domestic Product (Y_t)

Following regression was performed-

$$\Delta \ln Y_t = \beta_1 + \beta_2 \Delta \ln X_1 + \beta_3 \Delta \ln X_2 + \beta_4 \Delta \ln X_3 + \beta_5 \Delta \ln X_4 + \varepsilon_t \quad (3)$$

Model Results:

India:

$$\Delta \ln (GDP_t) = 0.04 + 0.33 \Delta \ln (hL_t) + 0.20 \Delta \ln (GCF_t) + 0.03 \Delta \ln (FRI_t) - 0.17 \Delta \ln (TRI_t) \quad (4)$$

South Korea:

$$\Delta \ln (GDP_t) = 0.01 + 0.83 \Delta \ln (hL_t) + 0.18 \Delta \ln (GCF_t) + 0.07 \Delta \ln (FRI_t) + 0.02 \Delta \ln (TRI_t) \quad (5)$$

11.1.3. Model 1 Inference

Some very important economic interpretations can be made from the above regression results as can be seen from *Table 3*, (4) & (5). The first result that can be observed is that the elasticity of GDP with respect to human capital augmented labour is positive as well as statistically significant for both India and Korea (Equation (4) and (5)). This shows that investment in human capital was quite a significant achievement and played a very important role in the post-reform growth of the two countries (Rodrik, Understanding Economic Policy Reform,

1996). The magnitude of the impact of human capital augmented labour on GDP is higher in case of South Korea than India and that is quite intuitive because South Korea's Human Capital Index which takes into consideration educational expenditure on the total labour force is higher than that in India (Noland, 2005). Secondly, the Gross Capital Formation is also seen to have a positive and a significant impact on both the countries. The magnitude of the impact is also more or less the same. This means that as capital formation increases in the economy, GDP also increases but this does not mean that the rate at which capital formation is taking place in India particularly is adequate. This notion is explained in the subsequent paragraphs. The third indicator of the model is the financial reform index which is a composite variable consisting two indicators namely, domestic credit to private sector and broad money (which is the velocity of circulation of money in an economy). Financial reform index shows a positive impact on both India's GDP as well as Korea's GDP with a higher magnitude in case of Korea which is as expected but it is not significant in both cases. Therefore, I would like to throw light on some of the reasons as to why the

financial reform index is not significant first in case of India and then South Korea.

In India's context, according to the conventional idea it is believed that the 1991 reforms mark the structural break in the India Economic Policy. However, there are various studies conducted which reveal that the trend break in GDP growth is not the year 1991 but much prior to that. One such study is by Brad DeLong where the most significant structural break is estimated to be in 1952 (Hatekar & Dogre, 2005). According to Dani Rodrik, the real break in GDP growth came in the early 1980s rather than in the 1990s (Rodrik & Subramanian, From Hindu Growth to Productivity Surge, 2004) when there was an attitudinal shift in government's policies which were more 'pro-business' rather than 'pro-market'. The rise in the per capita economic growth rate has been tremendous since 1980. From 1.7% in 1950-80, it increased to 3.8% in the 1980-2000. This happened mainly because of abolishment of the socialist policies and the license raj system. But the question of what were the main underlying reasons behind this phenomenon growth has been a topic of debate for quite long. A lot of economists and policy makers like M.S Ahluwalia, T.N Srinivasan and S.D Tendulkar are believers

of 1991 as being the major breakthrough in India's economic history. According to them it was opening up the external sector by way of reduced trade barriers, greater inflow of foreign investment and the privatization process which set the Indian economy on a growth path. Although this notion is not entirely wrong and has some truth in it, but it neglects the fact that the actual initiation of growth took place way before in 1980s. It can be easily seen that 1980s was responsible for more than doubling of India's growth rate with not much of change in the trend after 1991. In fact, the total factor productivity was seen to have decelerated after 1991. The fig 1 takes into account the three indicators of aggregate growth- real GDP per worker, real GDP per capita and the total factor productivity. A sharp upward trend can be seen in these three indicators since 1980s and it is also very clearly seen that the rate of growth has been higher in the 1980s decade as compared to the 1990s decade.

This fact can also be validated by another study conducted by an economist by the name Pulapre Balakrishnan. In this study he carried out a regression model wherein he had estimated 1991 to be the break point in the Indian Economic Policy since 1950, but the results of his regression showed that

while the growth in the subsequent two decades after the 1991 reforms strengthened against the period prior to the reforms, the break point selected (1991) was not statistically significant. Also, similar to the findings of Rodrik and Subramanian, Balakrishnan also found that the growth performance of the Indian economy in the 90's was not significantly better than in the 80's (Balakrishnan, "Macroeconomic policy and economic growth in the 1990s", 2005). What India followed in the 1980s was a pro-business policy and what it followed post 1991 liberalization was pro-market policies. It is first important to differentiate between the two types of policy regimes. Pro-business policies aim at strengthening the existing industrial establishments and manufacturing units and giving them incentives to boost productivity by reducing capacity restrictions, corporate taxes and price controls. It also involves reduction in tariff on imports of those products which act as inputs for manufacturing industry while maintaining high tariffs on imports of final products. This in economic jargon is termed as tariff escalation. On the other hand, pro-market policies aim at increasing the volume of trade by removing the barriers to trade and by opening up the markets to allow foreign

firms to enter and compete with the existing firms (Rodrik & Subramanian, From Hindu Growth to Productivity Surge, 2004). As mentioned in earlier, Korea also followed a pro-business strategy in their reforms of 1960s and 1970s and Korea's remarkable growth rates as a consequence cannot be denied. And according to the explanation above, what triggered India's boom were also the pro-business policies adopted primarily by the then prime minister Indira Gandhi after taking charge in 1980. Thus, 1991 reforms cannot be seen as responsible for India's transition to high levels of growth rate, although their role in maintaining the already set off growth levels cannot be denied (Rodrik & Subramanian, From Hindu Growth to Productivity Surge, 2004). Therefore, the financial reform index variable is insignificant for India. The forth variable is the Trade reform index which comprises of volume of trade as a measure of trade openness. In India's case it is seen to be negatively affecting the GDP. The primary reason for this is the fact that India's imports overweigh India's exports in the post 1991 period (RBI- Handbook of statistics). The insignificance of the volume of trade variable (imports + exports) in case of South Korea is because trade

liberalization in Korea focused majorly on removal of quantitative restrictions rather than tariffs because its primary aim was to boost its own manufacturing industries by reducing tariffs on only the raw materials and other intermediate goods while maintaining high tariffs on final products.

11.2. Model 2

Model 2 is created on the basis of the findings of Model 1. Having established the fact that the real trend break in India's GDP growth rate occurred in the early 1980s when the government followed pro-business policies to incentivize the existing manufacturing units (similar to what South Korea did in their 1960s and 1970s reforms) as opposed to the 1991 reform period, the second model analyses the effect of four new variables on the Gross Domestic Product of India, namely- Foreign Direct Investment (FDI), Manufacturing Value Added, Exports of Manufactured Products and Imports of Manufactured Products. These variables are taken to find an answer to the question that "If India follows the kind of reform policies South Korea followed (pro-business and export-led), would it be able to achieve higher growth levels?" in other words, if India gives more impetus to its indigenous manufacturing industries and focus on increasing the

domestic production of manufactured goods, is there a case for higher growth? For the completeness of the model, two variables have been retained from the previous model- Human Capital Augmented Labour and Gross Capital Formation.

11.2.1. Hypothesis

This model is based on the basic premise that Manufacturing Value Added (with a 1 period lag), Foreign Direct Investment (FDI) and Export of Manufactured Products have a positive impact on the GDP of India in the post reform period, while Imports of Manufactured Products negatively affect GDP.

11.2.2. Methodology

An empirical model has been developed through a Multivariate Linear Regression Process to assess the impact of four new variables on the Gross Domestic Product of India, namely- Foreign Direct Investment (FDI), Manufacturing Value Added, Exports of Manufactured Products and Imports of Manufactured Products. The period of study considered is the same as in model 1 i.e. from 1992-2012. The Correlogram test and the Augmented Dickey-Fuller (ADF) test has been conducted to check for the presence of unit

roots. First Difference of the data series was taken to make the data stationary.

Working of the Model

Ordinary Least Squares have been conducted on the sample data to analyse the functional relationship –

$$\begin{aligned} \text{GDP}_t &= \beta_1 + \beta_2 \text{hL}_t + \beta_3 \\ \text{Gross_capital_formation}_t &+ \beta_4 \text{FDI}_t + \beta_5 \\ \text{Manuf_Va}_t &+ \beta_6 \text{Export_manuf}_t + \beta_7 \\ \text{Import_manuf}_t &+ \varepsilon_t \end{aligned} \quad (6)$$

To tackle the problem of non-stationarity, the Correlogram approach and the Augmented Dicky-fuller test was performed. All the five variables are non-stationary at 10% level of significance for both India and Korea as can be seen from **Table 4**. On taking first difference of the series in natural log form, all the seven variables are stationary at least at the 8% level of significance as can be seen from Table 5. The above table also shows that the variables are integrated of order 1 i.e. they are I (1). Proceeding with OLS after all variables are I (1) in the post reforms period. In order to ascertain the impact of Human Capital Augmented Labour (X_1), Gross Capital Formation (X_2), FDI (X_3) Manufacturing Value-Add (X_4), Exports of Manufactures (X_5) and Imports of

Manufactures (X_6) on Gross Domestic Product (Y_t), the following regression was performed-

$$\begin{aligned} \Delta \ln Y_t &= \beta_1 + \beta_2 \Delta \ln X_1 + \beta_3 \Delta \ln X_2 + \beta_4 \\ \Delta \ln X_3 &+ \beta_5 \Delta \ln X_4 + \beta_6 \Delta \ln X_5 + \beta_7 \\ \Delta \ln X_6 &+ \varepsilon_t \end{aligned}$$

11.2.3. Model 2 Inference

Some important economic interpretations that can be made from the above regression results and *Table 6*- According to conventional belief FDI inflows must have a positive impact on economic growth due to efficient diffusion of technology and formation of human capital. But few studies done on this subject as well as the regression results undermine this conventional belief by providing no empirical evidence for the same. The role of FDI has been acknowledged by economists since the 1991 economic reforms but greater emphasis has been given to FDI only in the recent years. So one of the reasons for a negative impact of FDI on GDP in my model is because of the fact that FDI inflows have been quite volatile in the chosen time period (1992-2012) as can be seen from *Fig 2*. According to a study conducted, the growth effects of FDI can be ambiguous in the short run but a co-integration analysis reveals that there is a

long-run relationship between FDI and economic growth in India. However, this relationship is a unidirectional causality from GDP to FDI and not vice-versa (Chakraborty & Mukherjee, 2012) The next most significant variable in model-2 is manufacturing value added. This variable is found to have a positive impact on the GDP of India and is also statistically significant. This very result reveals that we have a case for “Make in India” campaign which aims at making India a manufacturing hub. The services sector boom has started coming to a standstill. But the manufacturing sector has particularly performed very poorly with an increase of only 1.1% of GDP in 2012-13 and a subsequent fall by 0.7% of GDP in 2013-14. So a great deal of improvement in the Indian manufacturing sector is the need of the hour. The next variable in the model in exports of manufactured products which is found to have a positive influence on GDP. But it is statistically insignificant because of the very fact that India’s exports of manufactured products have never been adequate to have an impact on the GDP precisely because the manufacturing sector itself has been under-performing since the beginning of the reforms in 1991. Even after significant reforms in the exchange rate policy in 1991, the growth of exports has

been barely higher in 90s as compared to in 80s (Balakrishnan, Macroeconomic policy and economic growth in the 1990s, 2005). The last variable in this model is Import of manufactured products which is seen to have a negative impact on the GDP. This is because imports are a drag on the economy because they lead to an outflow of funds from the economies. However, that does not mean that imports are bad for economic development as high level of imports imply that there is a growing demand in the domestic economy which is fuelled by high aggregate income. But what needs to be analysed is the composition of imports. High amount of imports of raw materials and intermediate goods lead to increase in productivity of the domestic industries which imports of consumer durable may hamper the growth of the country’s own manufacturing base.

12. A Case for Manufacturing in India in favour of the South Korean Economic Model of Growth

As per the results of Model-1 and Model-2, it can be contended that there can be a case for manufacturing in India in favour of the Korean growth model and hence a reason to pursue make in India. “Make in India” is the most talked about campaign started by our newly elected Prime Minister Narendra D.

Modi which does not fail to catch our attention and is all an attempt to turn India into the next world-class manufacturing hub. He is joined by or rather supported by economists like Arvind Panagariya who share the same view and believe that it's only the manufacturing approach which can turn around India's growth trajectory for the best. India appears in the list of world's ten largest economies with a third rank in terms of purchasing power parity. Its annual output amounts to \$2 trillion out of which 57% is accrued to the services sector which employs only 28% of the Indian population that too majorly in the urban part of the country. Since services is a completely knowledge driven sector and considering the fact the majority of India population lacks the right kind of skill sets and training, it comes as no surprise that the employment level in this sector is low. So the need of the hour calls for a more robust manufacturing sector that can absorb the vast India population. But what is extremely alarming is that the manufacturing sector as of today contributes only 15-16% to GDP which is far below the Asian standards. If our Manufacturing Value added is compared with that of Korea's, it can be seen that we lag behind them to a great extent, *Fig 3*. One point which needs to be kept in mind while

talking about manufacturing value added in India is that it is the registered (organized) manufacturing sector which contributes most to the GDP as opposed to the unregistered sector. The registered sector is 7.2 times more productive than the unregistered sector. According to a study conducted, it was pointed out that if the entire Indian population was employed in the organized sector, India would have been as rich as Korea in PPP terms (Amirapu & Subramanian, 2015). In the decade of 2010, India saw a rise in its population by 181 million despite a decline in fertility levels. Amidst growing population, there should have been a growth in the number of jobs to accommodate the increase but it has not been adequate (Mallet, 2015). One is not denying the importance of the labour dividend in India, in fact India does not need to reduce the number of hands on the workplace, what it needs to do is to pull out the factors that stop the workforce to be more productive. In a meeting held by PM Modi wherein he called various diplomats, business leaders and analysts, one of speakers suggested that in order to cater to the booming Indian population, India perhaps needs an addition of 1 million jobs every month. A very interesting case was put across by Victor Mallet in

“Reimagining India” (McKinsey’s annual book). One of India’s largest carmakers were found to be boasting of their increasing sales per annum and the fact that they were hiring some 800 extra employees in their manufacturing unit. Mallet gave his analysis on this piece of information by saying that the plant which was hiring extra workers belonged to the Jaguar Land Rover subsidiary of Tata Motors which was situated in English midlands and not anywhere in India which is desperately in need for jobs (Mallet, 2015). Since the Indian economy is characterized by abundance of unskilled or less skilled labour force, the question posing India at this time is, where to employ its surplus under skilled labour force. Owing to this question, there is a very strong case for the development of the registered manufacturing sector in India. The timing seems perfect for India since labour costs are increasing in China and Japan has started to withdraw production from China due to military tensions and alongside, the Indian rupee has depreciated making our labour more competitive.

13. But does the world really want to make in India?

Well, the answer as of now is a NO. Before India even aspires to grow its

manufacturing base, it will have to consider alleviating some of the major concerns facing potential investors not just foreign but also Indian themselves. These issues challenging the growth of the manufacturing sector are explained below.

13.1. Fiscal Deficit in India

Although both USA and India are running unsustainable levels of fiscal deficit, the problem seems to be more worrisome in case of India. A high fiscal deficit in India has not only led to a credit rating downgrading but also crowded out private corporate investments due to increase in interest rates which has severely hampered manufacturing growth in India, *Fig 4*. Higher government expenditure has also led to an increase in demand push inflation in the country which has shown a relatively sticky behaviour. Also because of high inflation in the country, maximum demand is leaking to the outside world leading to imports outweighing exports and hence a CAD of \$7.8 billion in the first quarter of 2014-15, making India’s manufacturing exports less competitive in the world markets. Another striking problem with India’s budget deficit which needs to be highlighted is that a reduction in fiscal deficit in the past two-three years has been accompanied by an increase in the revenue

deficit of the centre. This particularly is a problem worth flagging because it shows negative contribution of the government to capital formation in the country (Balakrishnan, "Macroeconomic policy and economic growth in the 1990s", 2005). It also shows decline in central government savings which in turn reduces the flow of domestic credit to the private sector. In fact, the central government's contribution to capital formation was at its peak only in the early 90s when an IMF programme was in place for external surveillance of macroeconomic policies adopted by countries (Balakrishnan, "Macroeconomic policy and economic growth in the 1990s", 2005). If the trend of increasing revenue deficit along with declining capital expenditure continues, any increase in fiscal deficit in future is likely to finance only consumption expenditure of the centre (Balakrishnan, "Macroeconomic policy and economic growth in the 1990s", 2005).

13.2. Cost of doing Business in India

According a survey conducted by the Indo-German Chamber of Commerce, it was found that those German companies which are working in India are although optimistic about the long term prospects of the country, at the same time they are also worried about an array of problems while

working in a non-business conducive environment in India. Out of all the respondents interviewed, 58% of them held bureaucracy as the major hindrance of doing business in India, this was followed by 52% who polled for lack of infrastructure, 45% for corruption, 35% for lack of skilled labour force and 32% for tax-related disputes. Table 7 very clearly indicates India's ranking in doing business vis-à-vis Korea. These figures have been complied by the World Bank Group in their flagship publication- Doing "Business 2015: Going Beyond Efficiency". One more reason which companies consider as a hindrance is the high corporate taxes in India, *Fig 5*. The Korean tax structure is very friendly for large conglomerates in order to boost them but Indian tax structure dis-incentivizes the local and foreign industries. Also, it is difficult to attract foreign investors because if there is a joint venture in India, the controlling share (51%) remains with the Indian player, the cap for foreign players is set at 49% as a result of lobbying on part of the local firms against foreign competition. Three key determinants of Manufacturing

13.2.1. Electricity

Statistics show that around 400 million people in India (which accounts for about

one-third of the entire population) is devoid of electricity. Problems like losses in transmission and pilferage cost India almost 21% of its produced electricity in 2011 as estimated by World Bank. These estimates are worse than countries like Ghana, Senegal and Gabon for the year 2011. Lack of private ownership (less than 20%) in the power sector has caused lack of competition in the market. Power sector remains a monopoly run by state-owned enterprises.

13.2.2. Land

Land Acquisition in India is a serious problem. The Land Acquisition Act which has recently been passed is only for agricultural fields, not for the massive amounts of barren land which are just lying idle in various parts of the country, northern part of Karnataka for example. The challenge and the need of the hour is to identify these vast spaces and strive to put them to some productive use by relaxing stringent laws, removing power supply bottlenecks and addressing the question of misallocation of resource.

13.3. Implementation of GST

This is one tax reform for which the entire country is waiting eagerly with a hope that it will ease out the pitfalls and drawbacks of the existing tax regime. This

comprehensive tax reform is being thought to contribute to India's growth path to a large extent. It is a system whereby a single tax rate shall prevail in the economy abolishing various different taxes at the centre and the state level like CENVAT, sales tax, octroy etc. tax shall only be levied on the value added at each stage of the production. GST will also result in higher tax revenues for the government because it aims at increasing the tax base and the number of tax payers. This will automatically help reduce the biggest problem facing the country- fiscal deficit. According to a senior economist at the World Bank- Denis Medvedev, GST will eliminate the cascading effect of the current tax structure boosting the competitiveness of the major manufacturing sectors by almost 3-4% of the net sales, high growth and employment generation on a large scale.

13.4. Reluctance in signing the WTO Trade Facilitation Agreement

India has decided to veto the multilateral trade agreement on "Trade Facilitation" put forward by the developed countries so that it can continue with its PDS system of food grains as well as the food subsidies since food security for the poor people in India is

the government's topmost responsibility as argued by the finance minister Mr. Arun Jaitley. The welfare of its below poverty population is the new government's political bet. TFA primarily aims at reducing cross border hurdles in international trade to make trade in merchandise products easier and hassle free. It also aims to substantially reduce red-tape and bureaucratic influences. According to the OECD study, TFA is expected to reduce around 11-15% of the trade costs making a strong case for the developing countries who will stand to gain around 20 million jobs. This deal is inevitably good for India and there is no doubt about it. If India wants to boost its manufacturing sector, signing the trade facilitation is the sure bet. The Trade Facilitation deal is also considered a boon for the small and medium sized enterprises which will give them the opportunity to better participate in the global value chains by becoming more competitive. Logistical efficiency is the most important phenomenon if a country wishes to take part in value chains around the world to drive up its growth levels.

14. Concluding Remarks

This paper analyses through the 1st model, impact of growth indicators such as human capital augmented labour, Gross capital

formation and Reform measures undertaken in India in the period 1991 and in South Korea in the period 1960 and 1970 on the respective growth paths of both the countries through a modified Cobb-Douglas production function. The results showed that human capital and gross capital formation have had a significant positive impact on the GDP of both countries while the impact of reforms have varied across the countries. Financial reforms have impacted India and Korea positively but in case of India, they have not been very significant due to the fact which has been well researched by economists such as Dani Rodrik, Brad DeLong and Pulapre Balakrishnan that the real structural break point for the Indian growth trajectory has not been 1991 as conventionally assumed by new age economists like M.S. Ahluwalia, T.N. Srinivasan and S.D. Tendulkar, but it has been the early 1980s when there was a shift in the attitude of the Congress government under the leadership of Indira Gandhi towards pro-business economic policies. These policies aimed at incentivizing the existing manufacturing and industrial units in India and gave them a chance to make their presence in the domestic market. These policies are akin to those followed by South Korea during their

reforms of 1960s and 1970s. South Korea rigorously gave incentives to the big industrial giants (Chaebols) by following neo-mercantilist trade policies which encourage exports but discourage imports (of final products) as opposed to an open economy which promotes exports and imports both. This result helped me establish one fact for sure that in order to make the home producers more competitive with the rest of the world, it is important that the central government provides them with all the support though conducive business environment, availability of capital at low lending rates, lower corporate taxes and robust infrastructure. The 2nd model which carries forward the learnings from the 1st model helps to analyse the impact of manufacturing output as well as export of manufactured products on India's GDP. Manufacturing value added has a significant positive influence on our country's GDP. This provides a strong base for carrying out the plans under the most coveted campaign "Make in India". Export of manufactures also show a positive relationship with GDP implying that as manufactured exports will increase in India, India's GDP will also get a boost. Let's briefly look at the present condition of the manufacturing sector in India.

A study conducted by the Boston Consulting Group (BCG) and Confederation of Indian Industry (CII) reveals that over the last 20 years, India has shown an encouraging growth in global GDP from 1.2% to 2.5%. Its share in global manufacturing has also increased from 0.9% to 2% and the share of global merchandize exports also showed an upsurge from 0.5% to 1.7% in the last 20 years' time period. But between 2009 and 2013, there has been a trend reversal with the share of global GDP accruing to manufacturing reducing from 2.2% to 2%. If the Indian economy continues to perform in a similar way, it will be very difficult to meet the target that has been set by the National Manufacturing Policy (NMP, 2012). NMP targets the manufacturing sector to contribute 25% to GDP till 2022 and also create some 100 million additional jobs. But the current scenario is such that the contribution of manufacturing to GDP has fallen from 16% to 15% and less than five million jobs have been added over 2009 and 2013 (Bhattacharya, Bruce, & Mukherjee, 2014). To turn the target of NMP into a reality, the 'Make in India' campaign has been initiated by our newly elected Prime Minister Mr. Narender Modi.

The major initiatives that are being taken as a part of the campaign are-

- i. Development of smart cities to foster innovation and technology growth through an investment of USD 1.2 billion.
- ii. Encourage FDI inflows by upgrading the cap for railways to 100% and for defence and insurance to 49%.
- iii. Launching of a venture capital fund to the tune of INR 10,000 crore to boost MSMEs (Micro Small and Medium Enterprises).

In order to achieve the plans under “Make in India”, India needs to follow a very well defined and a structured approach. Some of the policy recommendations to turn the vision into a reality are given below-

14.1. Policy Recommendations

14.1.1. Getting the right infrastructure

India severely lacks in this front. Electricity, water supply, transit systems and all other pillars of infrastructure are craving investment from the central government. Their capacity is sub-optimal and execution is extremely poor. Efficient infrastructure does not only ensure proper functioning of the supply chains but also act as a smooth link between the industries and the markets domestically as well as globally.

14.1.2. Initiating Labour Reforms

There is a growing fear among the manufacturing leaders when it comes to increasing and expanding their labour force because they feel that it would be difficult to downsize the labour if the economy is going through a slowdown and also because of high managerial costs and efforts incurred to manage the labour unions. So, unless this issue of under confidence on part of the manufacturers is addressed, all manufacturing plans would be difficult to enforce. Government has introduced a Labour Identification Number (LIN) to tackle the problem of non-transparency in regulation and inspection of labour.

14.1.3. Easing out the process of doing business

Even when it has been two decades since the initiation of the 1991 reforms, India has not been able to provide a conducive environment to foster industrial production and entrepreneurial activities. The whole process of starting a business, from gaining permits from the government authorities to paying taxes is highly cumbersome in India. India ranks 142 on the ‘Ease of doing Business’ parameter according to the World Bank report. Thus, there is greater need for the central and the state government to step in to devise policies that are industry-

specific to cater to the needs of each sector individually.

14.1.4. Building an eco-system of exports in India

reviving the domestic manufacturing sector is a challenging task but at the same time it is incomplete if the government does not pay attention to building an export industry for the manufactured products because if India really wants to increase its competitiveness, it will have to exhibit its export prowess.

14.1.5. Attracting greater inflows of Foreign Direct Investment (FDI)

FDI inflows have a positive correlation with growth in manufacturing output. Several steps have already been taken in this front by the central government by reducing ceilings on the amount of FDI permitted in the country.

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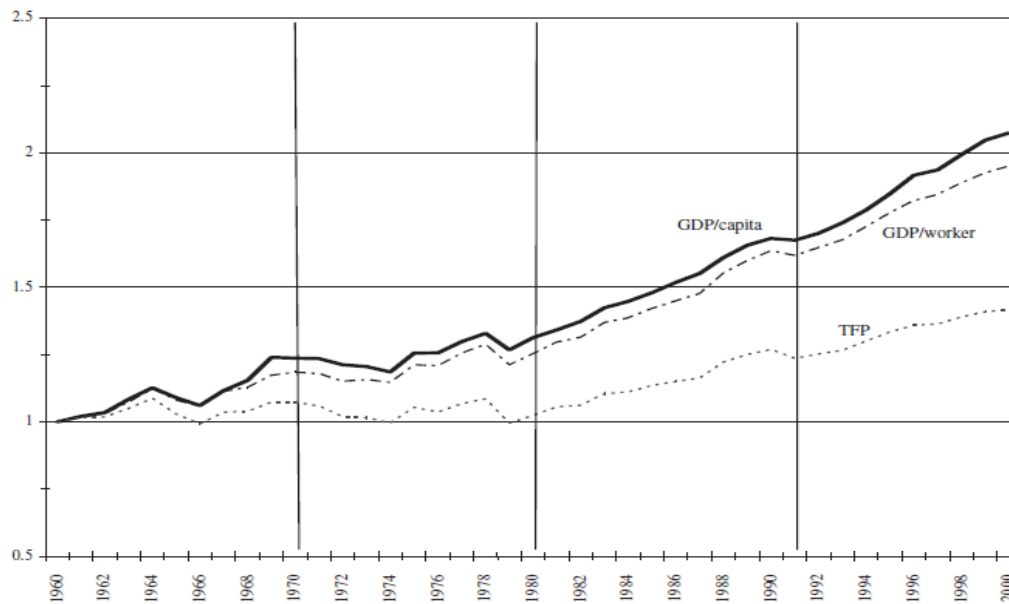
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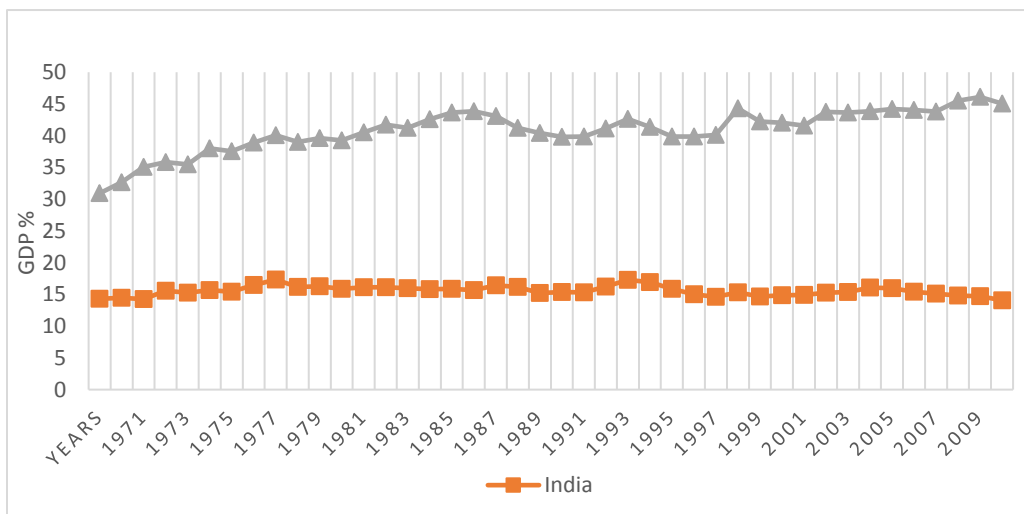
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Figure 1: India's Economic Performance (1960-2000)



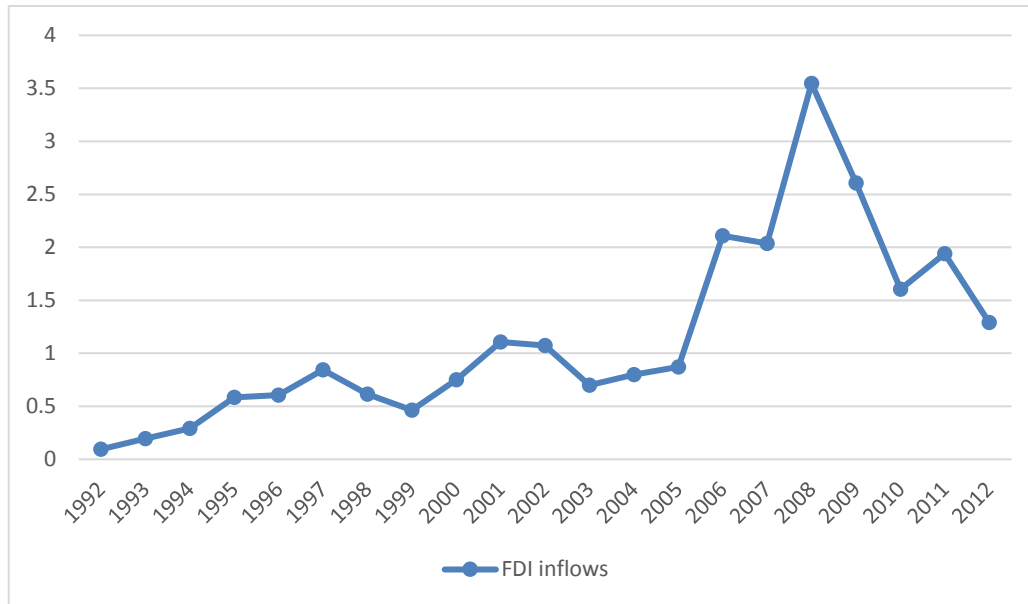
Source: Bosworth and Collins (2003)

Figure 2: Fdi Inflows In India (% Gdp)



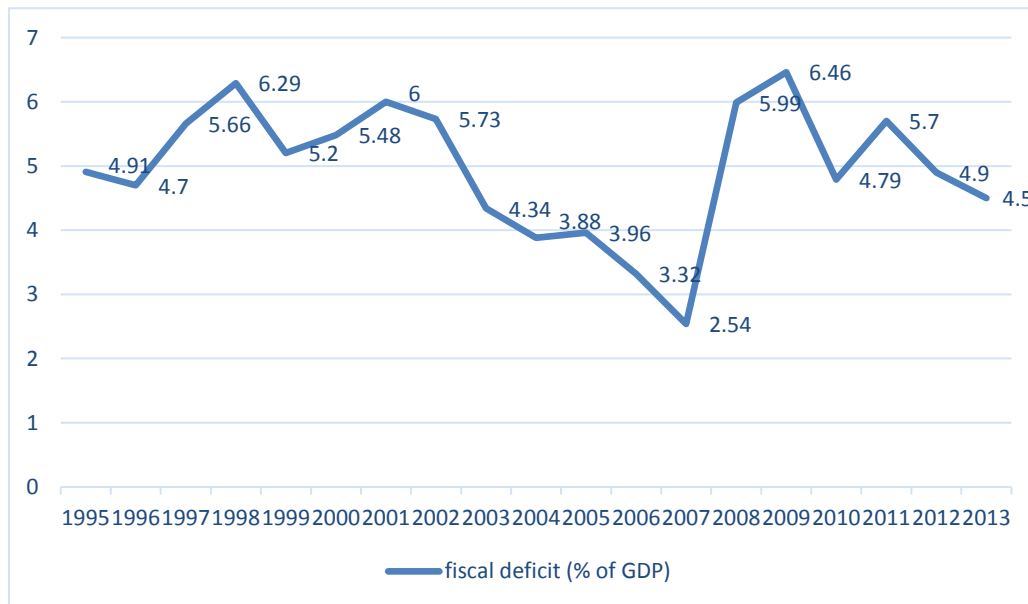
Source: World Development Indicators

Figure 3: Manufacturing Value Added of India and South Korea



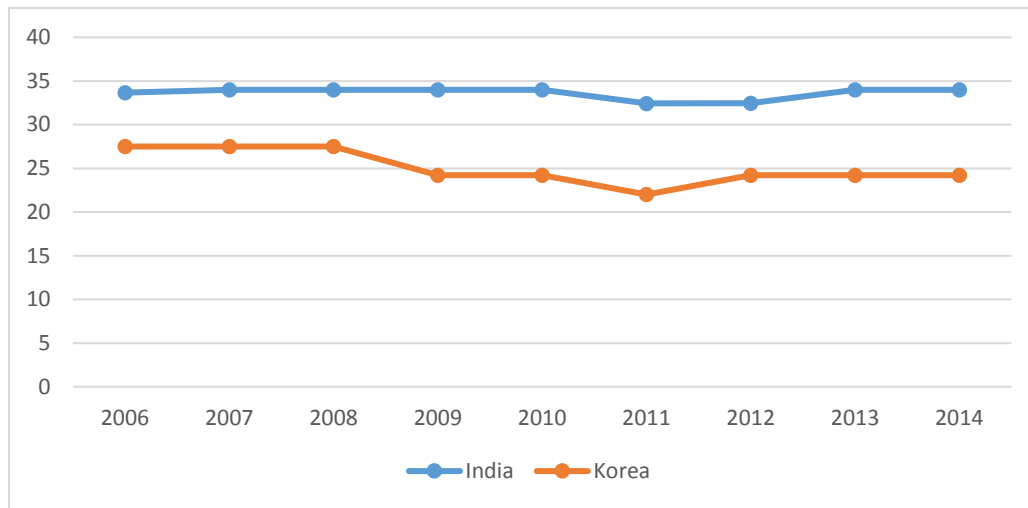
Source: World Development Indicators, 2010

Figure 4: Fiscal deficit as a percentage of GDP in India



Source: Planning Commission

Figure 5: Fiscal deficit as a percentage of GDP in India



Source: Planning Commission

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Table 1: ADF unit root test for level data

Variables	India		South Korea	
	ADF tau statistic	P-value	ADF tau statistic	P-value
Ln (GDP)	0.98	0.99	-1.88	0.33
Ln (hL)	-0.18	0.92	-0.48	0.97
Ln (Gross_capital_formation)	0.11	0.95	1.30	0.99
Ln (Financial_reform_index)	-1.006	0.75	0.47	0.98
Ln (Trade_reform_index)	0.046	0.95	-0.44	0.98

Table 2: ADF Unit Root Test for First-Differenced Data

Variables	India		South Korea	
	ADF tau statistic	P-value	ADF tau statistic	P-value
ΔLn (GDP)	-3.63	0.014	-3.74	0.01
ΔLn (hL)	-5.53	0.0001	-2.98	0.05
ΔLn (Gross_capital_formation)	-5.91	0.0001	-5.97	0.0001
ΔLn (Financial_reform_index)	-3.17	0.037	-2.85	0.06
ΔLn (Trade_reform_index)	-4.79	0.001	-3.86	0.009

Table 3: OLS Results for India and South Korea

Y_t = ΔLn (GDP)	India's statistics		Korea's statistics	
Variables	Coefficient	t-statistic	Coefficient	t-statistic
Constant	0.04	4.11***	0.01	0.6
ΔLn (hL)	0.33 (1 lag)	3.00***	0.83	2.7**
ΔLn	0.20	4.22***	0.18	5.0***
(Gross_capital_formation)	0.03	0.36	0.07 (2	0.38
ΔLn (Financial_reform_index)	-0.17	-2.57**	lags)	0.25
ΔLn (Trade_reform_index)			0.02	
	R² = 0.60		R² = 0.80	

Table 4: ADF Unit Root Test for Level Data

Variables	India	
	ADF tau statistic	P-value
Ln (GDP)	0.98	0.99
Ln (hL) (1 lag)	-0.18	0.92
Ln (Gross_capital_formation)	0.11	0.95
Ln (FDI)	-1.96	0.30
Ln (Manufacturing_VA) (1 lag)	-0.53	0.86
Ln (Exports_manufactures)	0.23	0.96
Ln (Imports_manufactures)	-0.31	0.91

Table 5: ADF unit root test for First-Differenced data

Variables	India	
	ADF tau statistic	P-value
Δ Ln (GDP)	-3.63	0.014
Δ Ln (hL) (1 lag)	-5.53	0.0001
Δ Ln (Gross_capital_formation)	-5.91	0.0001
Δ Ln (FDI)	-3.85	0.009
Δ Ln (Manufacturing_VA) (1 lag)	-3.81	0.002
Δ Ln (Exports_manufactures)	-2.44	0.035
Δ Ln (Imports_manufactures)	-2.96	0.192

Table 6: Ordinary Least Squares Results

$Y_t = \Delta$ Ln (GDP)		India	
Variables	Coefficient	t-statistic	
Constant	0.028	2.903 **	
Δ Ln (hL) (1 lag)	0.190	2.270 **	
Δ Ln (Gross_capital_formation)	0.197	3.920 ***	
Δ Ln (FDI)	-0.022	-2.363 **	
Δ Ln (Manufacturing_VA) (1 lag)	0.233	2.431 **	
Δ Ln (Exports_manufactures)	0.052	0.839	
Δ Ln (Imports_manufactures)	-0.095	-1.620	
		$R^2 = 0.67$	

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