Macroeconomic Analysis of Manufacturing Sector in India: Special Reference to Make India Concept

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Abstract

The present study overviews the macroeconomic scenario in India with special reference to manufacturing sector and attempt to address the need and potentiality of manufacturing sector for economic growth and creation of employment. The study covers the post economic reform period where industry and services sectors were major contributor for national income and output. The study focuses on role of manufacturing sector in structural transformation of the Indian economy in twenty first century; the study covers the economic growth stories of major developed and developing nations which have been major industrialized countries in the world. The present study uses simple growth rate and compounded annual growth rate for comparing the performance of manufacturing industries in India during post reform period. The foreign investment inflow, profits, bank credit and gross capital formation in manufacturing industries have been boosting the manufacture exports in India while exchange rate is insignificant to influence the manufacture exports in the long run. The percentage of manufacturing exports in total exports has declined to 64.1% in the financial year 2013-2014 from 77.1% in 2000-2001, which indicates the slowing manufacture exports performance. The results showed that India has potential capability to expand her economic growth through expansion of manufacturing sector and in order to succeed make India concept, the government need to take positive policy actions regarding business friendly economic policies such as more bilateral and multilateral agreements, flexible FDI policies, low tax rate, speedy implementation of the projects, accommodation of good infrastructure, more importance for labor productivity through skill enhancement, innovation and technological improvement.

Key words: Economic growth, GDP, Manufacturing Export, Exchange rate, FDI&FII, OLS Regression etc.

1. Introduction :

The economic development of any country in the twenty first century mainly depends on her trade performance. The economic liberalization in India took place in 1990s which changed the India's economic scenario in the world. In recent past India is one of the fastest growing economies in the world, especially during 2000s Indian economy was growing around 8% to 9% only second to China. Trade is the engine of growth which will help a country to produce more goods and service to feed growing demand. India growth story actually spurts after economic reforms in 1990s. The foreign exchange reserve was just 3,962 million US $ in 1989-1990 which was not enough to meet a year import bill and it increased to 38,036 million US dollar in 1999-2000 and 304223 million US dollar during 2013-2014, which is due to liberalization, privatization and globalization of Indian economy. The present study focuses on India macroeconomic scenario in the last decade and how manufacturing sector contributed for industrialization in India and national income. The present paper overviews the macroeconomic performance of manufacturing sector in India during 2000 to 2014 and its trend over the period of time. Moreover the paper illustrates the trends in GDP, industry and service sectors growth rate, composition of India exports basket, foreign investment flow and internal balance macroeconomic trends such as gross domestic capital formation, gross domestic savings, inflation, fiscal deficit, M3 growth and saving-investment gap during 2000 to 2014.

2. Literature Review

Page (1994) discussed the growth story of 23 East Asian countries during 1965 to 1990 and found that laissez faire policy and industrialization helped East Asian countries to achieve high economic development in this region than any other regions in the world. Especially Japan, four Asian tigers like Hong Kong, the Republic of Korea, Singapore, and Taiwan; followed by three newly industrialized economies of Southeast Asia, Indonesia, Malaysia, and Thailand had achieved high economic growth. Radelet et.al (1997) analyzed Asia's dramatic economic growth during 1965 to 1990 and forecasted the growth story during 1990 to 2020. The authors covered a wide range of topics, including the determinants of economic growth across countries, the relationship between manufactured exports and economic growth, the determinants of savings rates, the role of governance in East Asia's rapid growth, and economic outlook for Asia's future. Szirmai et. al (2005) proposes a series of adjustments which result in more consistent long-run series of labour productivity for 21 manufacturing sectors from 1980-2002 in China and found labour productivity increased from 5.3 per cent of the US level in 1995 to 13.7 per cent in 2002. Liu and Daly (2011) attempted to summarize and explain the key determinants of FDI inflow across low and high technology manufacturing industry across three geographical regions of China and the manufacturing sector has dominated China's FDI inflow. The authors empirically investigated the determinants of FDI in high and low technology classes by market size, labor cost, labor quality and infrastructure. Author investigated the theoretical foundations for China's transition from a low tech to a high tech manufacturing environment. Bhanumurthy and Sharma (2013) theoretically and empirically investigated the impact of exchange rate on India total exports during post reform period. The analysis was based on macro level by using time series data and ARDL model and the micro-firm level from the Indian manufacturing industries. The results showed that imports and imports tariffs were playing a major role in boosting exports growth in India and authors concluded that currency intervention to maintain week exchange rate won't help promotion of India exports.

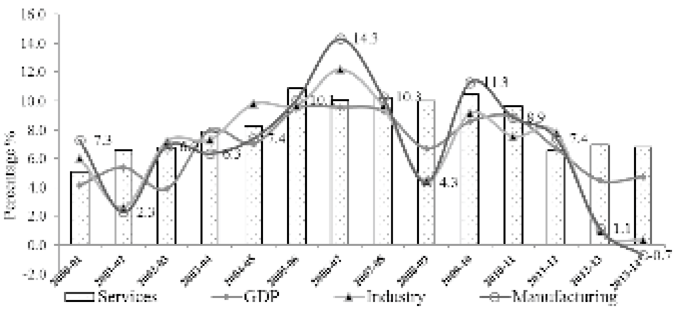
3. Research Methodology

The present study is based macroeconomic trends during post economic period in India. The time series data are taken from secondary sources specifically from RBI Hand Book of Statistics on Indian economy, Data book Compiled for use of Planning Commission, Annual Survey of Industries, IMF, UNCTAD, World Bank data base. Time series data from 1991 to 2014 is used for multiple regressions to find influence of major factors on manufacturing exports in India. SPSS and STATA statistical software were used for regression analysis.

4. India macroeconomic scenario

The economic development in India has been pushed by industry and service sectors and agriculture sector share in total GDP decreased to around 12% in the year 2013-14 while service sector share in real GDP has been increasing since 1995 and its share around 60% and industry sector share is 26% in the same period. Moreover, manufacturing has been contributing around 14% to 16% during last two decades which shows the stagnant industrial performance in India. The trends in major sector wise growth rate is illustrated in the figure 1 where industry and manufacturing sectors were moving closely over the period of time followed by real GDP and fluctuation is high on year on year growth trend. On the other hand, service sector has been growing around 8.3% during 2001 and 2014 while it has less volatility compared to other two major sectors in the economy. India manufacturing sector growth rate was peaked to 14.3% in 2006-07 and suddenly dipped into 4.3% in 2008-09 due to global recession. The manufacturing exports spurted during 2009 and 2010 but due to low demand in the international market manufacturing growth rate was decreased to 1.1% in 2012-13 followed negative growth rate of -0.7 during 2013-14. Therefore India should be take serious measure to boost its exports to strengthen the economy.

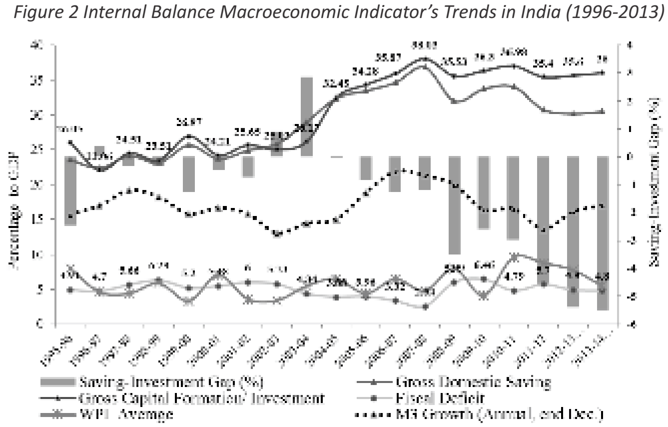
Figure 1 Sector wise Macroeconomic Trend during 2001-2014



Source: RBI, Hand Book of Statistics on Indian Economy

The macroeconomic performance of an economy is mainly explained by domestic economic performance such as saving and investment, price stability, fiscal deficit, trade deficit, money supply etc. Figure 2 illustrates the internal macroeconomic balance indicators during post reform period in India. Time series data illustrated in the figure 2 overviews the internal macroeconomic stability in India where gross domestic saving and investment as a percentage to real GDP was on an average 25% during 1996 to 2003 and investment gap that is difference between gross domestic saving and gross domestic investment was around ±1% and in the year 2003-04 saving investment gap is highest positive at +3 during post reform period which started mobilization of monetary resource to supply booming Indian economy as a result broad money (M3) as a percentage of real GDP supply also increased from 13% in 2003 to 21.83% in the year 2007 and grass domestic investment was 26% and 35.87% in the same period, after 2006 saving investment gap widened that is investment was higher than saving that was due to huge inflow of foreign investment along with broad money supply and it is market signal of prosperous growth of the economy in the long run. The internal macroeconomic balance in India during post 2007 global financial crisis helped Indian economy to revival from slowed economic growth. Meanwhile, inflation (WPI) in India was fluctuated around ±5% up to 2006 and price instability started after 2008 due to food inflation and higher fiscal deficit which fueled growing inflation to around 8% to 10% whole sale price inflation. Moreover, rupee depreciation in the recent past also helped to increase manufacturing exports.

Figure 2 Internal Balance Macroeconomic Indicator's Trends in India (1996-2013)

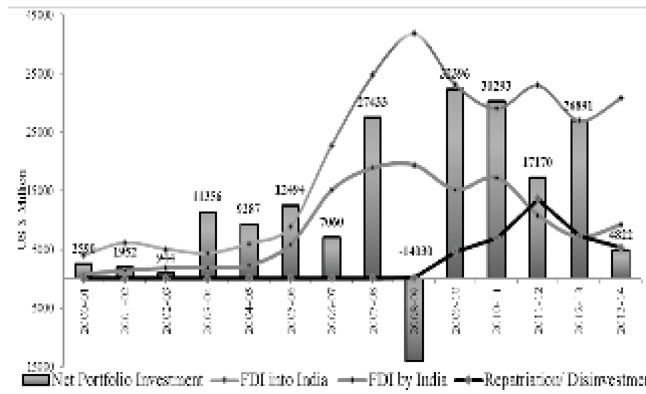


Source: Data book Compiled for use of Planning Commission 22nd December 2014.

5. Trends in Foreign Investment Inflow in India

The economic development process continues as increase in investment and consumption, in a globalized world investment flows diversely with the motive of profit. Industrialization needs financial investment to make trade as engine of growth. Figure 3 illustrates the trends in foreign investment inflow and outflow where FDI considerably increased to Rs 41,738 crore in the year 2008-09 from Rs 12,494 crore in the year 2005-06 which was due to strong economic growth in India and recession in advanced economies where investment was not conducive and profitable. Followed by FDI inflow outflow also increased and disinvestment also helped to mop up huge investment. Meanwhile, net portfolio investment was more volatile and fell to steep negative inflow that is Rs -14030 crore in the year 2008-09 which was due to global economic slowdown and uncertainty in equity market.

Figure 3 Foreign Investment Inflow in India during 2001-2014 (Y on Y growth rate)

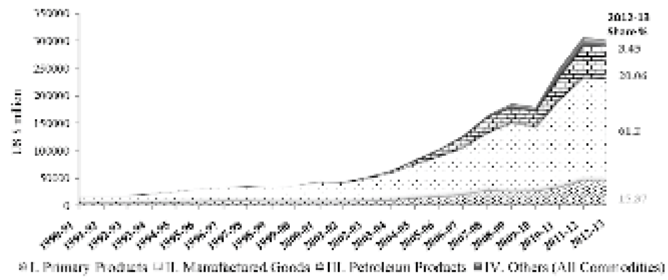


Source: RBI, Hand Book of Statistics on Indian Economy

6. Trends and Composition of India Exports

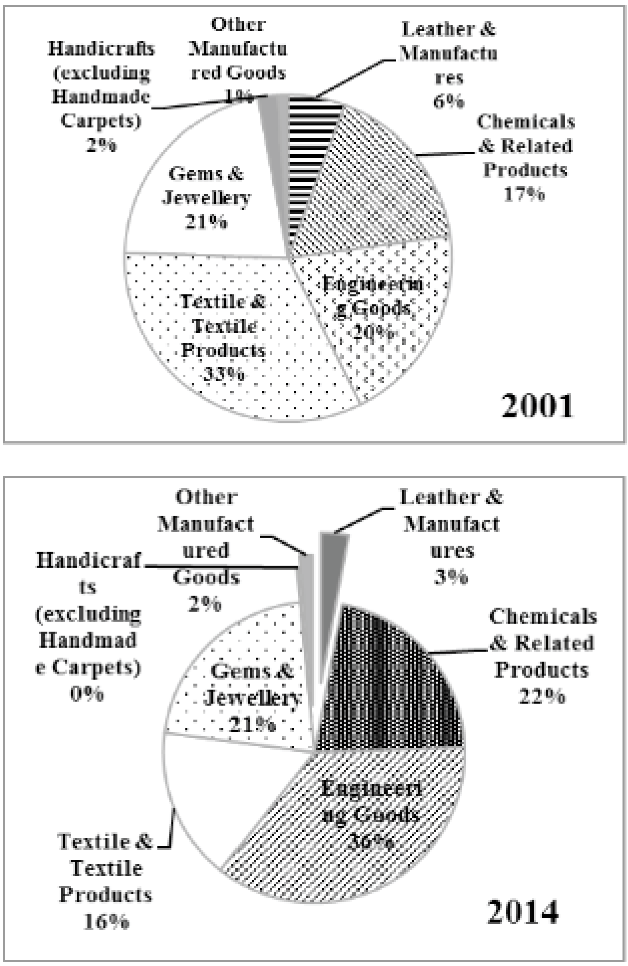
The composition of merchandise export basket of India during post economic reform period is illustrated in the figure 4. Data presented in the figure 4 illustrates that the majority share in total merchandise exports is comprised by manufacturing goods followed by refined petroleum products, primary products and others respectively. The manufacturing goods accounted more than 50% out of total merchandise exports that is 61.2%, petroleum products accounted 20.06%, primary goods by 15.37% and others accounted 3.25% during 2012-13. However, the exports share of manufacturing sector has been decreasing in total exports share which is illustrated in the figure 5. Whereas refined petroleum products and other goods share has been increasing. Meanwhile the share of manufacture exports as a percentage of total real GDP has been increasing at compounded annual growth rate of 2.1% during 2001 to 2014 followed by total export as a percentage of real GDP compounded annual growth rate was 4.19% which is higher than the world level where compounded annual growth rate of world exports as a percentage of world GDP is 1.82%. these statistical ratios are positive indicator of India industry growth and development but the share of manufactured exports as a percentage of total exports has negative compounded annual growth rate at -1.61% and manufacture exports share in total exports has declined to 61.4% during 2013-14 from 77.1% during 1990-91, therefore manufacture share decline is the severe issue for manufacture sector development in India and to become India is one of the best manufacturing hub in the world India need to take care of growth revival of manufacturing sector.

Figure 4 Trends in Composition of India Exports during 1991-2013



Source: RBI, Hand Book of Statistics on Indian Economy

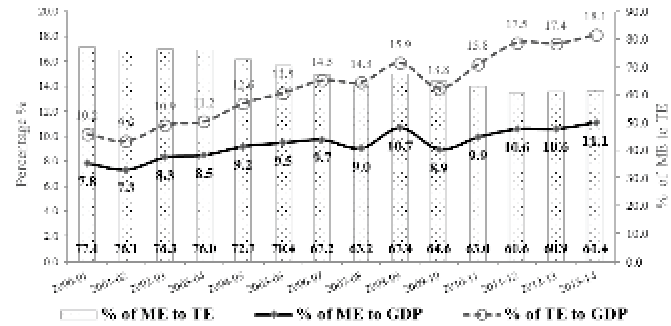
Figure 5 Compositions of Manufactured Goods Exports during 2001 and 2014



Source: RBI, Hand Book of Statistics on Indian Economy

The exports composition of manufactured goods had changed gradually during last decade, the major exports of manufactured goods in India are illustrated in the figure 3 where textile products were accounted highest amount of 33% followed by gems and jewelry 21%, engineering goods 20%, chemical products 17%, leather goods 6%, handicrafts 2% and others 1% in the year 2001. The share of engineering and chemical goods has been increasing in the total manufactured goods exports in India. In the year 2014, the engineering goods were accounted maximum share in the manufactured exports basket that is at 36%, chemical products 22%, gems & jewelry 21%, textile goods 16%, leather goods 3% and others 2%. These decadal changes in composition of manufacture exports of India are the signal of structural changes in the industrial production and transformation of conventional production of goods to new generation required products.

Figure 6 Ratio of Manufacture Exports & Total Exports to real GDP during 2000-2014

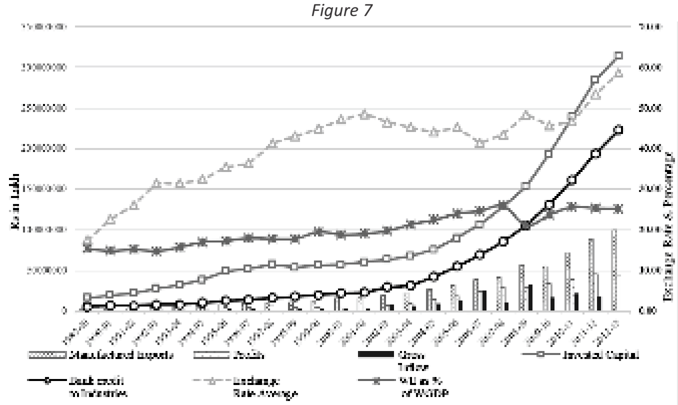


Source: Data book Compiled for use of Planning Commission 22nd December 2014. Note: ME, Manufactured goods Exports. TE, Total Exports

7. Manufactured Sector Performance in India

The manufacturing sector performance has been improving in India during post reform period. The time series data illustrated in the fgure 7, overviews the manufacturing sector exports, profits, gross foreign inflow into manufacturing sector, invested capital, bank credit to manufacturing industries in lakh rupees during post reform period and exchange rate is taken as average year on year which affects exports, followed by world exports as percentage of world real GDP which will explains the external macroeconomic conditions in the world. The exchange rate was persistent increasing trend during 1990s while manufacturing exports was moderate and increased export value from Rs.1993167 lakh in 1989-90 to Rs.12876068 lakh at 18.48 CAGR while profit of manufacturing industries during same period increased from Rs.813552 lakh to Rs.4733475 lakh at 17.36 CAGR. After introduction of fiscal discipline such as FRBM Act 2003 and world economic progress during 2000-2005 thereafter 2007 global financial crisis India managed her exports performance very well and manufactured exports increased from Rs.15685800 lakh in 2001 to Rs.99544100 lakh in 2013 while compounded annual growth rate was 15.27 which is lesser than 1990s but profit has grown at 21.40 compounded annual growth rate. Table 1 shows that compounded annual growth rate of manufacturing industries during post reform period and classified in three phases, and it indicates that after immediate economic reform in 1990s has improved the structure of the manufacturing sector in India and manufacturing industries has grown double digit during 2001 to 2007 and struggled to maintain growth prospects after 2007 global economic slowdown.

Figure 7



Source: RBI, World Bank and IMF reports

Table. 1 : Compounded Annual Growth Rate (CAGR)

Year	Manufactured Exports	Invested Capital	Profits	Gross Inflow	Bank credit to Industries
1990-2000	18.48	12.24	17.36	59.30	12.68
2001-2013	15.27	14.01	21.40	13.98	19.55
1990-2013	17.70	13.24	18.14	35.09	16.79

Source: Author calculation based on national & International data sources.

8. Conclusion

The present paper overviews the macroeconomic scenario in India during post economic reform era and attempt address various problems in the macroeconomic stability in India. The industrial developments in India helped to recovery from trade deficit and high growth of national income in the last decade. The manufacturing sector comprises more than 60% of total exports and engineering goods accounted more than 35% of total manufacturing exports in the recent past which is the good sign of right direction of India growth path and investment has been increasing to complement growing industries and demand consequence grass capital formation as a percentage of GDP is around 35% which really boosts Indian manufacturing sector. The share of manufacturing exports to total exports has been decreasing from 77.1% in 2000-2001 to 61.4% during 2013-2014, which is not good sign of manufacturing sector performance. Therefore, the performance of manufacturing sector needs to be revived to compete with other emerging economies. The performance of manufactured industries during post reform period showed that in order to increase manufacturing exports, she has to increase the profits, capital formation, credit facility and good infrastructure to produce goods cost effectively and judicious foreign exchange and internal macroeconomic stability definitely helps to attract more foreign investment. The make India concepts and Indian government liberalized trade policies definitely helps to attract investment and technology to boost her exports and employment for world's largest demographic dividend.

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