EXPORT COMPETITIVENESS OF INDIA:

AN ANALYSIS OF PRE AND POST RECESSION PERIOD

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IN

ECONOMICS

Supervised by:

Dr. Vishal Sarin
Assistant Professor in Economics
School of Business

Submitted by

Sayed Gulzar
Regd. no. 11412981

Faculty of Business and Arts

Lovely Professional University

Phagwara (Punjab)

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To my parents, for their blessing,

To my sisters, for their belief,

For Aaleen Bhat

DECLARATION

I declare that the dissertation entitled ***Export Competitiveness of India: An Analysis of Pre and Post Recession Period*** has been prepared by me under the guidance of Dr. Vishal Sarin, Assistant Professor in Economics, School of Business, Lovely Professional University, Phagwara Punjab. No part of this dissertation has formed the basis for the award of any degree or fellowship previously.

Date: 28-4-2015

Sayed Gulzar

Regd.no.11412981
School of Business,
Lovely Professional University,
Phagwara, Punjab (India)

CERTIFICATE

This is to certify that Sayed Gulzar bearing Reg. no. 11412981 has prepared his dissertation entitled ***Export Competitiveness of India: An Analysis of Pre and Post Recession Period*** for the award of M.Phil degree of the Lovely Professional University, Punjab**,** under my guidance and supervision. To the best of my knowledge, the present work is the result of his original investigation and study. No part of this work has ever been submitted for any other degree at any University. The dissertation is fit for submission and the fulfillment of the conditions for the award of degree of Master of Philosophy in Economics.

Date: 28-4-2015

Dr. Vishal Sarin
Assistant Professor in Economics
School of Business
Lovely Professional University
Phagwara, Punjab (India)

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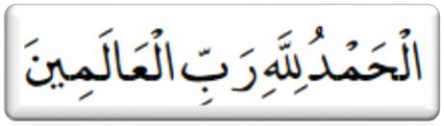

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Sayed Gulzar

Lovely Professional University

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1. ASEAN: Association of South East Asian Economies
2. BoP: Balance of Payments
3. CAGR: Compound Annual Growth Rate
4. CCE: Commodity Composition Effect
5. CE: Competitiveness Effect
6. CMS: Constant Market Share
7. CP: Competitively Positioned
8. EP: Emerging Products
9. FDI: Foreign Direct Investment
10. FII: Foreign Institutional Investment
11. GDP: Gross Domestic Product.
12. MDE: Market Distribution Effect
13. RCA: Revealed Comparative Advantage
14. TPL: Threatened Product Lines
15. UAE: United Arab Emirates
16. UNCOMTRADE: United Nations Commodity Trade
17. UNCTAD: United Nations Conference on Trade and Development
18. USA: United States of America
19. WDE: World Demand Effect
20. WP: Weakly Positioned
21. WTO: World Trade Organisation

Abstract

The study examines the Indian export sector for the time period of 2001 to 2013. The growth and competitiveness of Indian export sector has been analysed at two segregate levels of product classification, HS 6 digits and SITC 3 digit level. The Commodity wise competitiveness has been analysed at HS 6 digit levels using RCA approach for the average time periods of 2001-05 and 2012-13. The major exports like Textile, Base metals and minerals are found losing their comparative advantage over time; meanwhile some new high value added products are gaining momentum in the comparative advantage like Chemicals and machinery products. Over the same period of study Indian exports grew from 36 USD billion to 336 USD billion in the world market showing an improvement of about 300 USD billion in value terms. This export performance and growth is also analyzed in two segregate phases of pre-recession and post-recession to show the impact of global financial crisis on Indian export sector. Pre-recession (2001-07) shows an actual increase of Indian exports by $102 billion which was mostly due to the factors like market distribution and world growing demand. Competitiveness was not seen during the time frame. Post-recession period (2008-13) also shows an actual increase of $152 billion growth in exports which again was not due to the competitiveness of Indian exports but by the other factors that govern the export growth. The study reveals that export performance of India was attributed mainly to the market distribution of exports and negative aspect of competitiveness remained the disturbing aspect of Indian exports during the study period. In the whole period the competitiveness of Indian exports is not up to the mark but there has been a good concentration on the growing markets as export direction is changing from American and European developed economies to Asian developing economies mostly towards the western Asia where UAE is becoming the most favoured nation for Indian exports.

Key Words: Export Competitiveness, Competitiveness, Market Distribution, Pre-recession and Post-recession, HS 6 digit. SITC 3 digit, Most Favoured Nation

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Chapter - 1

INTRODUCTION

1.1 Introduction

Globalisation is a revolution which in terms of scope and significance is comparable to the industrial revolution. Whereas, the industrial revolution took place over a century ago, today's globalisation is taking place under our very eyes in a decade or two. Globalisation, sans criticisms, brought prosperity to many nations and became an instrument of growth. Trade has become jugular vein of globalisation, but merely is not enough to augment growth but a competency in exports carries a more weightage. Most of the empirical evidences support that exports are very beneficial for the economic growth (Chow, 1987; Salvatore and Hatcher, 1991). Exports promote growth by relaxing balance of payment constraints, enhances the country to import essential intermediate and capital goods, promote specialization and productivity gains through access to more technical knowledge through interaction, advanced technologies, learning by doing and better management practices (Thirlwall, 1979; Melitz, 2003).

Exports could be productive for the economies to gain wealth and become prosperous. Because, exports play a significant role in development process, stimulates growth or it can be said a positive relationship exists between export growth rate and the GDP of any nation (Onafowara, 1996). Exports can be very effective in promoting economic growth of nations as suggested by various researchers like Berg and Schmidt (1994), Giles, Giles and McCann (1992) and propose that, export growth can lead to greater productive efficiency due to economies of scale, better technical improvements due to foreign contact of export led companies and so on.

Exports play an important role in international exchange and are very necessary because countries have to pay for their imports which they can't produce at home. Exports help the economy in encouraging the product specialization and thus benefits from comparative advantage, diverting resources for fuller utilization and large scale production, makes it very healthy and growing economy and thus paves way for rapid development of the economies (Ram, 1987; Chennery, 1979).

Export expansion and open economic policies stimulates the efficiency in the economy through exploitation of increasing returns to scale by large scale production, specialization of production accordingly with the comparative advantage and through tough competition in the world market that leads to more innovations, process and product improvements and thus stimulates economic growth and development (Sachs and Warner, 1995).

In nutshell, exports have an invaluable effect on the economic growth of the nation. Following the above mentioned statements of various studies it can be summarized as; export expansion can lead to higher economic growth, thus increases the employment opportunities in the economy and hence the betterment and the welfare of societies would be the outcome of such process.

The export led growth strategies have benefitted most of the developing economies of Asia through export expansion and export diversification. Examples are, Asian Tigers, who started their export led growth strategy in 1960's now have been given the status of almost developed nations. The South-East Asian economies like Malaysia, Thailand and Indonesia started their export oriented growth strategy in 1970's, and there after China started its outward policy in early 80's, and nowadays has become one recurring example of an export diversified nation (UNCTAD, 2008). India's tryst with globalisation started in early 90's, thus integrated with the globe and is becoming one of the most influential and flourishing economies of the world each passing year.

Two major theories concerned about international trade were given in the early 19th and 20th century by David Ricardo the former one, and, later by Eli Hecksher and Bertil Ohlin. The first one talk about the differences in labour productivity and the second one talk about the factor endowments that are responsible for trade. Both these theories talk about gains of trade and thus both are looking at how to gain wealth on one side, and, on other side, how to divert resources for better utilization. It is concluded from the said theories; an economy must export that commodity in which it has the comparative advantage. Comparative advantage, conceptualized by 'David Ricardo' (1817), then extended by 'Hecksher-Ohlin' (1933), to 'Vernon' (1966) suggest that, Comparative advantage can be due to resources or efficiency of labour (Ricardo) or can be due to factor abundance (Hecksher-Ohlin Model) or can be due to both technological factors and factor abundance (Vernon model). Comparative advantage when put simply is the lower cost

of production advantage in terms of equilibrium factor prices to that of competitors in the market. Cost advantage can be due to cheap primary and intermediate inputs of production or may be due to factor abundance (Hecksher-Ohlin) or large scale production (Krugman, 1980). These theories provide the base for economies to be involved in trade and make economies to know which of the commodity to trade with, or which product to export and what to take in exchange or import from the world economies. Thus, concluding remarks could be as, comparative advantage must be there for an economy to be involved in the world trade so that it could benefit from the world market.

1.2 Defining Export Competitiveness

With the advent of globalisation along with the policies of liberalisation and privatisation, the whole world has become a big manufacturing hub. However, only limited commodities in the modern world are actually enjoying absolute and comparative advantage. As most of the newly developed countries are now emerging as new hub of production and challenging conventionally endowed countries, as far as exports are concerned. Export competitiveness has emerged conclusively as an important part of export strategy of any nation. Competitiveness has been defined as the aptitude of the firms to face competition and survive while facing it, i.e., ability of the firms or companies to sell products that meet demand requirements of quantity, price and quality and side by side guarantee profits for the concerned firm or company (Latruffe, 2010). Accordingly from the said definition it can be generalized that export competitiveness may be in simpler terms the competitive structure of exported goods of any nation in the world market. In other words, it is how exports of any nation maintain their base in the world market in terms of price or quality and simultaneously prove profitable for the concerned nation. To capture the market a nation should be much competitive with respect to her rival nations. Through reduction of tariff rates, quotas, preference granting and similar policies somehow benefitted the countries in export exploitation but still they are not able to compete in the world market due to certain barriers they face like poor factor conditions, infrastructure, logistics inefficiencies and information and coordination failures which prevents them from exploiting the benefits of intra as well as inter industry trade (World Bank, 2014). Competiveness by some countries takes place through ‘intensive margins’ that is selling more of the same products to the same market and is done by

particularly middle and high income economies (Brenton and Newfarmer, 2009). But for most of the developing countries growth could be through 'extensive margins' that include new product, discovering new markets, that drives their export performance. So it is very necessary for developing economies to maintain their export competitiveness to survive in the world market. Export competitiveness may be due to price or cost of producing the product or may be due to the quality or specialization with which product is being made; all such related issues lead to competitiveness in the world market.

Due to more trade that is taking place each passing year, every economy is now focusing on the export competitiveness. The past few decades make both the composition as well volume of trade very high, so role of both price and non-price factors are becoming now more important for maintaining and promoting export competitiveness. While price factor makes the product relatively competitive than other competitors, non-price factors like quality, advertising, attractive brand name, packaging, delivery schedule as well as product designing promotes export competitiveness.

Export competitiveness is essential for economic growth and development of the economies and for their survival in this globalised world. Due to trade barrier reduction in the international market, most of the nations now focus on their export competitiveness and attention is being laid for promotion of export competitiveness (Prasad, 2004). For most of the developing economies of the globe, exports are crucial for maintaining the international exchange spectrum and to meet international payments, thus securing for economic growth and development. Thus export competitiveness can benefit these nations and makes them to grow at accelerating speed. There is both price as well as non price factors that are responsible for the competitiveness of exports, domestic resources or internal supply as well as external conditions and world demand (Sharma, 1992). That means, internal supply of resources or factor endowments, pace of production as well as specialization in that production and other economic policies in the concerned nation can make it competitive in the international market.

Export performance of any nation can be affected in many ways like, the changing structure of world trade, trade composition of commodities, market distribution of exports and finally the competitiveness of exports (Nayyar, 1976). That is, an economy though competitive in her exports cannot make good contribution to

her gross national income if the world demand for her exports is very low, similarly if the concerned country had most of the trade relations with those markets which are stagnant. Thus the absorption capacity of the demanding nation is also very important for the exporter economy. Price as well as quality matters in the world market, but price play an elegant role in determining the competitiveness of exported products. Because various competitors are providing similar products in the world market and it is relative price of the exported product of the concerned nation that comes into play, supporting the competitive edge of her exports. It clearly follows that products with lesser prices are definitely in advantage and having competitive edge over other rivalries (Paul and Mote, 1970).

Beside this, world market conditions should be supportive for increasing the competitiveness of the exports of a concerned nation. Because if world demand is not matching with the export growth of an economy, then a country cannot raise her share in the world market although her exports may be competitive in nature. So competitiveness also depends upon the absorption capacity of the world market or the market where a concerned economy's products go more. Hence, competitiveness would be the capability and capacity, in terms of both price as well as non-price factors of exporting countries to improvise the exportability of concerned goods or commodities in the global markets (Tiwari, 1986).

The economic environment of any nation is very much important and supportive for the competitiveness of her enterprises, to sustain in the market (Garelli, 2003). Thus economic policies of any nation cannot be neglected anyhow, because these policies are necessary for maintaining the competitiveness of export based firms. Trade policies and exchange rate management of governments can affect the export competitiveness through the changing price of commodities with respect to their rival nations. Because subsidization and undervalued exchange rate for the export led products can be used to reduce their price and can easily make these commodities more competitive in the world market.

In nutshell, export competitiveness depends on many factors, both internal as well as external, like price, resource and factor endowments of the concerned nation, price of similar products in the world market, economic policies regarding international trade, foreign exchange rate and overall economic progress of an economy.

1.3 India in Global Trade Scenario

Indian open policy stared in early 1990, since then the Indian economy has changed structurally and importance of capital flows and international trade has been mounting on its GDP growth. Indian economy however since an independent state was following an inward looking policy and relaying on the self sufficiency concept and economic autonomy till late 80's. Many developing economies of Asia in their seventies and eighties began to expand their exports with the growing world trade and India was still at its strict regulated economic policies. Albeit in late 80's India also started expansionary fiscal policies and partial deregulation which increased both domestic as well as foreign debt. Besides this other shocks hit the economy like Gulf War that led to increase in the oil prices and slowdown in the global market and the collapse of Soviet market, all these hampered the growth of Indian economy and worsens its trade deficit in 1991 which further resulted into Indian Balance of Payment crisis (Chauvin and Lemoine, 2003).

Government of India started liberalization policy in India in early 90's only after Balance of Payment crisis and thus globalise the economy. The reforms in trade sector as well as exchange rate policy lead to growing impact of exports on Indian output growth, thus made India to enter swiftly into the global market. Indian economy however during its pre-globalisation years i.e., till the early 1990's, average tariff rates were beyond 200 percent, quantitative margins on imports were far-reaching and there were inflexible margins on foreign investments. Since the liberalization period, remarkable results have been created by the Indian trade sector, and the Indian economy is becoming one of the fastest and flourishing economies of the globe. Tariff rates have fallen down on both agricultural as well as non-agricultural products, and quantitative restrictions on imports have been eliminated, and foreign investment norms have been unperturbed for almost for all sectors (World Bank, 2005). This has given boost to the Indian merchandise trade for the past few decades. By open and liberal economic policies India is now one of the hot destinations in the world in terms of Foreign Direct Investment (FDI) or trade relations. There has been an increase in the merchandise trade of India in percentage terms of her GDP from 12.7 in 1990 to 24.4 in 2004 to 41.5 in 2013, exports of goods and services in percentage terms of GDP has risen from 6.9 in 1990 to 17.6 in 2004 to 24.8 in 2013 (World Bank, 2013), indicating that the merchandise trade and export sector is showing a swelling importance on Indian economy.

Export growth could be utilised in the promotion of technical knowhow, new capital and machinery, expertise and market capturing for Indian economy. There has been however some ups and downs in Indian export sector recently due to global financial crisis and there after Euro zone debt crisis, but India somehow managed to uphold her export base in the market. The present study would be focusing on India's export competitiveness both in terms of its products and overall performance and competitiveness for the time period of 2001 to 2013.

India is contributing about 1.6 percent share of total merchandise trade in the world (WTO, 2013). It would be worthwhile to analyze, how India has performed in the world market during the last decade of 2001 to 2013 in terms of her exports. Two segregate time periods would be considered for the export performance of India; pre-recession period of 2001 to 2007 and post-recession period of 2008-2013 which would reflect the impact of recession on the performance of Indian export sector.

A decisive role is played by the supply and demand conditions for changing the comparative advantage outline of any country. So, it becomes necessary to identify which of the products of Indian origin are trailing, getting hold of or maintaining their comparative advantage. To provide future directions, the analysis of the present study would guide us which commodities India should focus on and will provide us with the conditions, how to achieve competitiveness at both domestic as well as foreign market.

1.4 Rationale of Study

India has been shifting rapidly since liberalization period. Indian export market has been mainly known for exporting agricultural or labour-intensive products and most of the research has been done on agricultural exports. While looking at India, it is now diversifying her products and new more exportable items have taken place along with their geographical diversification in the world market (Veramani, 2012). Many trade pacts with both neighbouring as well as other far away regions took place during recent times to increase merchandise trade and therefore expertise also. Thus Indian products have many benefits as well as certain challenges taking into account its participation in many geographical regions and mostly in Asia where China and other already set countries are insincerely competing with each other. So it becomes very important to study Indian export market, what changes had occurred in its product comparative advantage and export performance since 2001 and to

demonstrate how much India can contribute or has the potential to contribute in terms of exports to this existing globe. This study will also shows the recession impact on the Indian export performance and thus two segregate periods will be studied, i.e., before crisis; 2001-07 and after crisis; 2008-13.

1.5 Objectives of the Study:

1. To analyse the trend and pattern of Indian exports.
2. To analyze the commodity wise competitiveness of Indian exports.
3. To analyze the adaption of the Indian exports in terms of components as competitiveness, commodity composition, expansion of world trade and market distribution.

1.6 Research Methodology and Data Sources

Study is based on secondary data covering time period from 2001-2013. For the analyses of RCA the data is based on Harmonized Classification (HS) at 6-digit level. It includes 5808 reported products that are on HS 6-digit level for analyzing the competitiveness of Indian exports. For analyzing the export performance and overall competitiveness of India SITC-3 digit product classification is used. It covers 257 product lines that represent the overall exports of India. Thirty four countries have been taken into consideration and their regional place according to UNCTAD classification (see Appendix 1), because these selected economies cover up more than 80 percent of total trade of India. The selected countries are United States, Canada, United Arab Emirates, China, Japan, Israel, Australia, Netherlands, United Kingdom, Germany, Brazil, South Africa, Pakistan, Bangladesh, Nepal, France, Belgium, Italy, Taiwan Province of China, Republic of Korea, Egypt, Singapore, Vietnam, Indonesia, Thailand, Iran, Russian Federation, Saudi Arabia, Turkey, Oman, Sri Lanka, Malaysia, Spain and Hong Kong SAR China. The commodity wise competitiveness of Indian exports has been analyzed by applying the method of RCA. Likewise, for overall export performance CMS approach has been applied.

Study is broadly analysed with two basic methods, as follows:

Method I

Revealed comparative Advantage (RCA) Index:

The comparative advantage concept has been widely used in economic literature to discuss the comparative advantageous products of the nations in which they have competitive sharpness in the market. However, there is no direct method

given by the creator of this term to measure such competitive edge. So, it was of keen interest of economists to develop a specific technique that could measure the comparative or competitive nature of the commodities. Bella Balassa (1965), a Hungarian economist developed such technique that comes to known as Revealed Comparative Advantage or RCA simply, sometimes known as Balassa index. Based on this index, comparative advantage of the commodities can be brought into picture. It shows us which commodity is comparatively advantageous and has the ability to compete in the market. However, this index is not meant to capture future comparative advantage of a country, as RCA indices are based on actual data. Albeit, RCA indices estimated over time can point to the general direction in which the pattern of comparative advantage is moving (Muel, 1996). The RCA index is used to compare a country's world export share of a commodity, with the country's total export share in total world exports. If RCA value comes to be greater than one which means country is having comparative advantage in that particular commodity under consideration and vice-versa. RCA index would then be used to measure the comparative advantage and trade specialization of the country. In this study RCA methodology used by Mahmood (2004) has been applied and analyzed accordingly the same way;

The RCA index is given by formulae as,

$$RCAcg = \frac{X_{cg} / X_c}{X_{wg} / X_w}$$

Where; *RCAcg* = Revealed comparative advantage of country *c* in product *g*.
X_{cg} = exports of commodity *g* by country *c;* X_c = total exports of country *c.*
X_{Wg} = world exports of commodity *g;* X_w= total world exports.

Accordingly, country *c* exhibits revealed comparative advantage in the export of good *g* if *RCAcg* is greater than one.

The RCA approach measured for the analysis is based on the average difference of time periods of 2012-13 and 2001-05. Regarding the average difference, it is only made because RCA is a static technique and on average terms it could give at least the appropriate results regarding the comparative advantage of the commodities, as commodity comparative advantage changes with time but RCA

technique due to its static nature may not provide better results, thus average time period of 2001-05 and 20012-13 is taken for the comparative advantage of the commodities during the study period.

Based on RCA index some of the products may show comparative disadvantage but may show comparative advantage in the near future. Mahmood (2004) suggested a methodology to identify competitive, emerging and weekly positioned products as discussed below:

Competitively Positioned Product Lines:

These product lines had RCA index greater than one and show reliable improvement over time due to constructive external as well as internal conditions. In this category fall the products that show:

- RCA index is greater than 1 in the average time period of 2012-13,
  i.e., $RCA_{2012-13}$ >1 for any product line
- And also, difference between RCA index of any product line in average (time frame) of years 2012-13 and average of years 2001-05 is positive or greater than zero,
  i.e., $RCA_{2012-13}$ - $RCA_{2001-05}$ >0

Threatened Product Lines:

These product lines had RCA index greater than one but due to unsympathetic interior and exterior conditions RCA index is now screening a deteriorating trend. In this category fall the products that show as:

- $RCA_{2012-13}$>1 for the concerned product line
- However, difference between averages of RCA in 2012-13 and 2001-05 is negative for the concerned product line, i.e., $RCA_{2012-13}$ - $RCA_{2001-05}$ < 0.

Emerging Products:

These products are exhibiting RCA indices that are less than one but achieved Comparative advantage due to approving internal as well external factors. In other words, their relative position in the world export market is improving. These products have been further sub-divided into two more options which are:

Tier I

- It includes those product lines where, $RCA_{2012-13} < 1$, but equals to 0.5 or > 0.5 in the average period of 2012-13.
- Difference between the RCA averages of 2012-13 and 2001-05 is positive for the concerned product lines, i.e., $RCA_{2012-13} - RCA_{2001-05} > 0$

Tier II

- It includes product lines where, $RCA_{2012-13} < 0.5$.
- Difference between the RCA averages of 2012-13 and 2001-05 is positive for the concerned product line, i.e., $RCA_{2012-13} - RCA_{2001-05} > 0$.

Weakly Positioned Products:

These products are showing RCA indices less than one and are declining due to non-conducive global and domestic factors. This group is also divided into 2 sub-groups which are:

Tier I

- It includes the product lines that exhibit as;
  $RCA_{2012-13} < 1$, but equal to 0.5 or > 0.5 in the same period.
- Difference between the RCA averages of 2012-13 and 2001-05 is negative for the concerned product line, i.e., $RCA_{2012-13} - RCA_{2001-05} < 0$.

Tier II

- In this group are product lines that show;
  $RCA_{2012-13} < 0.5$.
- Difference between the RCA averages of 2012-13 and 2001-05 is negative for the concerned product line, i.e., $RCA_{2012-13} - RCA_{2001-05} < 0$.

This RCA approach has two main advantages here for Indian exports. Firstly, it will recognize the potency and limitation of India's exports profile as at 2012-13. Secondly, it allows an appraisal of the extent of competitiveness of India's exports in the world market.

The data set for the analysis is export data of India since 2001 onwards at HS 6-digit level drawn from UN Commodity Trade data. For detail see Appendix 3. The data set includes 5808 product lines and is analyzed in the way as described in the methodology.

Method II:

Constant Market Share Analysis:

The constant market share (CMS) approach is a very influential technique that is used to measure the export performance of the nation in terms of various effects like, the exports of any nation can grow or stagnate due to the world market conditions or how world market is demanding the goods and commodities which can make concerned nations exports to grow or stagnate respectively. This effect has been known by the name of 'world demand effect'. In this way other factor for export growth could be that exports of a concerned nation can be driven by those commodities that have a good demand from world which is known to be 'commodity composition effect'. Similarly, other reason for growth could be that the concerned country can make its exports grow due to the 'market distribution effect' which is exporting to those markets which have greater demand for products of concerned country and vice-versa. In a similar manner other effect includes both price as well as non price factors that contribute for export growth or opposite which is known as 'competitiveness effect'. All these effects can be generalized in this CMS approach and analyzed accordingly. CMS technique pioneered by Tyszynsky in 1951 and since then the approach has been very fashionable for determining the export performance of any country.

This method is very trendy and is very famous due to its simplicity and applicability for the published data. To analyze the performance of Indian export market, same model would be applied so that export performance could be brought into picture. CMS is given by formulae as;

$$\Delta X = \underbrace{\sum_{i=1}^{n} rXi}_{(a)} + \underbrace{\sum_{i=1}^{n} riXi - \sum_{i=1}^{n} rXi}_{(b)} + \underbrace{\sum_{i=1}^{n}\sum_{j=1}^{n} rijXij - \sum_{i=1}^{n} riXi}_{(c)} + \underbrace{\Delta X - \sum_{i=1}^{n}\sum_{j=1}^{n} rijXij}_{(d)}$$

Where,

ΔX is the change in country's exports

'r' is the incremental percentage in total world exports (excluding India) from first period to second period.

'ri' is the incremental percentage in the world exports of i*th* commodity from first period to period second but excluding India.

'rij' is the percentage increment in world exports of i*th* commodity to j*th* region from first period to period second excluding India.
'Xi' is India's exports of i*th* commodity to the rest of the world in the first period.
'Xij' is India's exports of commodity '*i' to* region *'j'* in the first period.

In the model, term of the equation represented by 'a' on the right hand side refers to overall growth in the world exports and thus termed as the "World Trade Effect (WTE)." This effect shows that the exports growth of a nation can be maintained if world demand is sufficient for overall exports. In other words, this term estimates the changing level of the exports of the concerned country that had merely maintained its share in the world market.

Part of the model represented by 'b' on the right hand side captures the effect of the differential export growth of the products in the export container of the world in relation to the export of the hub country. This effect is termed as the "Commodity Composition Effect (CCE)". In other words, this effect measures the commodity wise growth, i.e., whether the concerned country has maintained the export growth of those commodities that world is demanding in that particular period. A positive value for this term indicates that focus country's exports during the specific period were concerted in commodities for which the growth rates of world exports were higher than the world average for all commodities. A negative value indicates just the opposite - that is, the focus country's exports were concentrated in the commodities for which world demand was growing relatively slow.

Notation 'c' reflects the "Market Distribution Effect (MDE)", which can be illustrated in the same as the Commodity-Composition Effect. A positive value indicates that concerned country's exports during the specific period were directed to the markets (i.e. regions), which were rising faster than the world average and a negative value indicates the opposite.

Part of the equation designated by 'd' is showing "competitiveness effect", which reflects the difference between the real export growth of focus country (ΔX) and the growth that would have occurred had the country maintained its export share of each commodity to each market ($\sum_{i=1}^{n}\sum_{j=1}^{n} rijXij$). A positive value is reflective of a general enhancement in the competitiveness of the exporting country due to the various price and non-price factors. Hence, it is referred as "Competitiveness Effect (CE)". The method would be used to obtain the performance of Indian exports during

the given time frame to see the competitiveness effect, commodity effect and market distribution effect, thus the 3rd objective of this study would be analyzed.

Further, for commodity wise analysis, export performance is calculated by taking Commodity Composition Effect (CCE) equal to zero because the percentage increase in total world exports of particular commodity '*i'* i.e., *(ri)* is equal to percentage increase in total world exports *(r)*. The statement simply means that (*r=ri)* for commodity wise analysis of export performance which makes CCE equal to zero. Similarly for region wise analysis *rij* equals to *ri* that make Market Distribution Effect (MDE) zero and thus MDE would disappear for the analysis of export performance for market wise analysis.

Data Sources:

The data for the present study has been taken from various sources which are; United Nations Commerce and Trade (UNCOMTRADE), United Nations Conference on Trade and Development (UNCTAD), World Bank and World Trade Organization (WTO).

1.7 Chapter Scheme

The study includes six broad chapters which are as;

Chapter one deals with the introduction and rationale of the study. Besides this research methodology and objectives are also included in this chapter.

Chapter two is for reviewing the past literature, national as well as international studies are briefly summarised regarding the present study.

Chapter three demonstrates the growth, composition and direction of Indian exports during 2001 to 2013 and thus 1st objective of the study is analyzed in this chapter.

Chapter four presents the scenario of product wise competitiveness of Indian exports for the period of 2001 to 2013, hence 2nd objective of the study is explained.

Chapter five analyzes the export performance of India with respect to four different aspects of export growth in two different periods of pre-recession and post-recession during 2001 to 2013, covering the 3rd objective of the study.

Lastly, chapter six gives the concluding remarks of the study with some policy suggestions for the same.

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Chapter - 2

REVIEW OF LITERAURE

International trade is one of the sectors in the economy that play an imperative role in the developmental process of the economies of the world (Meier, 1980). It is trade that gives birth to development, knowledge and technical know-how, experience and methods to accomplish such process (Cairncross, 1961). However trade is not only the main component of growth but export growth show a escalating effect on the growth of economies in today's global world and have been given very much importance since the earlier times from mercantilists and classical Adam Smith to the present day economics scholars.

Most of the developing economies have liberalized their economies in 1980's and India also initiated such process in early 1990 in many sectors like trade, public sector, financial sector etc. The opening up of these economies proved beneficial in many ways to their gross domestic product (GDP) growth rate. Exports become crucial in determining the GDP of such economies like China, Singapore and South Korea. The products which countries should export depend upon their comparative advantage and how they perform in the market is purely their competitive structure. The index of Revealed Comparative Advantage (RCA) has been used by many researchers around the globe to check which commodity is advantageous for the nation to be introduced in the world market, or in simper terms, which commodity should be traded in the world market for trade gains. In a similar way, Constant Market Share (CMS) approach is used to check the export performance of any nation and makes it clear whether the exported product are of competitive nature, also shows whether export growth was by competitiveness or other related factors like world trade, market distribution effect and composition effect of exported commodities. These techniques proved very rewarding for the nations to uphold their export matter in the world market. Some of the studies that have used these techniques for showing the comparative and competitive advantage of the commodities which flow around the world economy are discussed as:

Balassa (1977) undertook a study of the comparative advantage pattern of industrial economies for the period 1953 to 1971 using RCA technique, came up with

the results that showed, as the diversification of exports tends to increase due to more technological development a setback takes place at higher levels.

Rashid and Othman (1993) in their paper investigated the growth in exports of ASEAN wood products during 1979 to 1987. The Constant Market Share Analysis was used to determine ASEAN export growth performance comparatively to average growth in world export of wood products. Their results showed that the ASEAN wood products export trade was vulnerable to world economic conditions, and the composition of ASEAN's wood products export in terms of the lack of commodity and market diversifications had further contributed to the lack in market share improvements.

Akhter and Mahmood (1995) have analyzed the export growth and performance in Pakistan during the time period of 1984-1985 to 1988-89 and 1988-89 to 1992-93. Constant market share technique had been used to estimate global trade effect, product composition effect, market distribution effect and the competitiveness effect. The anticipated results found that the competitiveness of the conventional exports, except rice and cotton, showed a positive trend from the first period to second period. That was mainly due to the relative advantage of Pakistan for those products. The decreased competitiveness of cotton was may be due to the enlarged fortification by the USA and the European Community and the new aggressive entrants of East Asia into cotton export market.

Lim (1997) attempted to illuminate the description of North Korean economy by investigating her overseas trade. He categorized commodities into three types based on Ricardo, Hecksher-Ohlin and product cycle theories, as which theory supports the production and trade of that particular good in the world market. Based on RCA analysis, he explained the level of development accomplished by North Korea from Ricardo to HO to Product cycle goods.

Leu (1998) presented that comparative advantage had shifted from Japan to East Asian Economies. The analysis presented by him using RCA technique was mainly on the exports of these economies to US market from 1980 to 1994 and the results supported his belief that there was a shift of comparative advantage from Japan to Korea, Taiwan and Singapore.

Poramacom (2002) analyzed the RCA technique for exploring export structure of Thailand's rubber industry. His study revealed that the comparative advantage of Thailand in natural rubber was less than that of Indonesia in the same production line to the market of United States. In a similar way, CMS model was used to show the export performance of Thailand, comparing the time period of 1995-1996 to 1997-1998, Thailand however, showed declining real export growth from period one to period two, which mainly came from standard growth effect, competitive effect and market effect.

Mahmood (2004) in his paper analyzed the Pakistan's non-agricultural sector by using RCA index for the time frame of 1990 to 2000 at HS 4-digit level. The results showed that Pakistan has been unsuccessful to generate a concrete base for an export-led growth. However, textiles and clothes show a dependable base due to both natural and human factor endowments during the period, but Pakistan was unsuccessful to shift from the low-value added unskilled labour-intensive products to technology-intensive high-value added manufacturing.

Smyth (2005) analyzed the Irish Economy using RCA index from 1997 to 2002. His study showed an altering structure of native industries trailing their comparative advantage with respect to the high tech sector's driven by FDI.

Widgren (2005) analyzed some selected economies of Asia, America and Europe based on their comparative advantage between the years of 1996 and 2002. His study was based on the Harmonized System classification at the 4-digit level, and analyzed that comparative advantage based on factor content had some resemblance in the Asian economies, but RCA for US was elevated for highly skilled labour products and that of European nations had moved towards the utilization of both physical as well as human capital.

Suprihatini (2005) used CMS approach for Indonesian tea exports and the results showed that exports of Indonesian tea was lower than that of world tea growth due to production composition problem, distribution phase problem and low competitiveness of Indonesian tea.

Civan and Serin (2008) used RCA analysis as their paper tried to investigate, to what extent Turkey had a comparative or relative advantage in the product lines

like olive oil, tomato and fruit juice in the European Union market for the time frame of 1995-2005, and how their comparative advantage status has changed over the study period. Their results pointed out that Turkey was having elevated comparative advantage in the product lines of fruit juice and olive oil markets in the European Union, but same is not the case in the tomato market.

Hadad (2010) used the RCA index for Middle East and North African countries and showed that 10 out of the 15 countries have comparative advantage only in some primary products and mostly in oil, and now comparative advantage is being squeezed by nations like China and India to Eastern Europe.

Georgiou et al. (2010) analyzed the Greek's export performance during the time period of 1996-2006, while considering export structure of Greek at SITC 4-digit level. Constant Market Share method was used in order to evaluate Greek export market shares and the factors underlying their changes. Their study had showed that the degree of antagonism in global markets, and even with the decline in export market shares in Greece and other developed economies, Greek export performance was pleasing. The changing direction of Greek exports towards the markets of South-Eastern Europe and the Mediterranean and Middle East were unbreakable by the soaring growth of these countries. However, trade performance was negatively inclined by commodity composition (in terms of quality and variety) and competitiveness, over the time period of 1996-2006, due to the underlying structure of production. Even though, the technological concentration of Greek exports had enhanced substantially over the time being under review, it had not improved adequately. Greek exports were still, concentrated in low and medium technology sectors, and hence were unable to take advantage of the trends of overseas demand.

Coutinho and Fontoura (2012) in their paper used the two methodologies of RCA & CMS to assess the competitiveness of the exports of manufactured products of China and India in the EU15 market. In terms of specialty, both countries witnessed a high share of exports in the Traditional sector. But while China showed an enlargement of its specialization in the Machinery sector and Electronic Apparatus over the 2000s, India displayed an advantage mainly in the Agricultural sector and also in Metal products and Stones and Ores and Precious Metals.

Mahmood and Shabab (2013) analyzed leather industry in selected Asian countries namely India, China and Pakistan using Revealed Comparative Advantage Index and showed that Pakistan had a high comparative advantage in the leather products in excess of selected economies during the study period of 2002 to 2009.

Kaya et al. (2013) in their paper investigated the performance of exports for Turkey by Constant Market Share method for the period of 1995-2011. Turkey's trade with its main trading partners was analyzed using SITC-3 digit data. The assessment of Turkey's export performance was based on market share effect, product adaptation effect and product composition effect. Their outcome revealed that the increase in Turkey's export performance stemmed from optimistic market share and product composition effects. The product adaptation effect however showed negative trend during that period.

In the Indian context the few studies that used these techniques of RCA and CMS are summarized as;

Batra and Khan (2005) used the same index for Indian economy at HS-2digit and 6-digit classification of products. The researchers compared India's relative advantage with that of China and also studied the individual economies for the years of 2000 and 2003. Their study doesn't found any structural change in the comparative advantages of the respective economies, except for some sectors within manufacturing. However, both India and China enjoyed a competitive relationship in chemicals and mineral and metal manufactures.

Veramani (2007) tried to scrutinize the sources of India's export growth during the pre- and post-reform period. The researcher used CMS approach to conclude the results and showed that India's export growth had not been manifestly high in the most parts of the post-reform period (1993-2005), although it got momentum since 2002. In contrast to the pre-reform period of 1950-90, India's exports had been mounting faster than the rate of growth in the world exports during the post reform period. Further, the export growth during the post-reform period normally had been broad-based. However, there had been considerable growth of intra-industry trade of India during the post reform period under study i.e., 1993-2005.

Burange and Chaddha (2008) analyzed RCA index for India for a time period of 1995 to 2005 and elucidated that India had comparative advantage in labour intensive products like textile, and scale intensive like steel and iron and chemicals. They also classified products into Ricardian, Hecksher-Ohlin (HO) and product cycle goods and found that India is producing more of Ricardo and HO goods but has not been able to race in product cycle goods.

Sundaresan (2010) applied RCA index for Indian agricultural sector and analyzed that India had comparative advantage mostly in vegetables, spices, fruits and marine products and Indian agriculture contributes almost 12% of total merchandise export of India.

Bhattacharyya (2011) analyzed the comparative advantage analyses for Indian agricultural market with respect to EU, USA, Canada and found India had comparative advantage in vegetables and fruits in EU market but is not so for the flower sector which shows prominently less comparative advantage.

Pillania and Fetscherin (2012) analyzed RCA for Indian industries and found that India had comparative advantage mostly in dedicated industries like Gums, Carpets, Silk, Pearls, Precious Stones and Metals to the world standard. The author showed that India's global dynamic industries are mainly in commodities, raw materials and skilled labour relatively than high tech mechanized sector.

Mukerjee and Mukerjee (2012) used the CMS approach to scrutinize the export performance of Indian three main products viz. cotton, gems and jewellery and electronic goods, they concluded with Indian gems and jewellery exports compose momentous share of country's total exports and have also performed very well in the world market. Whereas cotton had shown a declining drifts in Indian exports as well as to the world cotton market. Electronic sector is the forthcoming sector which has shown remarkable growth rate internally and has export potential in the worldwide market in the near future.

Chinadurai and Kanaka (2012) used RCA to India's few major agricultural exporting commodities and showed the changes in their comparative advantage status for the duration of the post reforms period of 1994-95 to 2008-09. Results showed that India had enjoyed a comparative advantage in tea exports but had depicted a

declining trend over the years. An analogous pattern was observed in coffee exports also, where India had been found trailing her comparative advantage to other world coffee exporters. Also an unstable pattern of comparative advantage had been observed in the case of rice exports with discontinuous ups and downs in the status. A plodding decline in India's comparative advantage had been depicted for exports of sugar and cashew also. While in the same time India had strengthened her place in the global markets in exports of Ground nut.

Sheikh and Thomas (2013) analyzed the competitiveness of export of meat and meat preparations from India using CMS Analysis based on the time series data from 1991 to 2011. Competiveness of meat and meat preparations exported is decomposed into four factors namely – commodity composition effect, market share effect, competitiveness effect and market distribution effect. Their results explored that Indian export of meat and meat preparation grew at a compound annual rate of 22.5 per cent as against the CAGR of 13.4 per cent over the study period. This increase was mainly due to the market share effect and market distribution effect.

Kathuria (2013) used the RCA index for analyzing comparatively the textile and clothing sector in India with Bangladesh and results showed that India is trailing her comparative advantage of clothing against Bangladesh primarily due to high labour cost, power and transaction cost and low labour and technical productivity over its competitor.

Immanuel et al. (2014) in their study have appraised the competitiveness, performance and determinants of ornamental fish exports from India during 1991 to 2009 using CMS & RCA. The RCA was used to delineate the export competitiveness and CMS to identify explicit markets and identify realistic competitiveness for Indian ornamental fish exports. The results proposed that India had made incredible progress in the export of ornamental fish. The main export destinations for Indian ornamental fish were Singapore followed by Japan, USA, Malaysia and Germany. CMS analysis exposed that exports were in fact more aggressive in USA in contrast to major export destinations namely Singapore and others.

Sundaramoorthy et al. (2014) in their study explored the impact of the opening up of the trade by analyzing the volatility, diversification of exports and

disintegration of the export growth of cotton based textile items into different constituents using constant market share (CMS) analysis for the period of 1999 to 2010 for Indian economy. Their results showed that there is an increase in the unsteadiness of cotton based exports and the market share for raw cotton as well as apparel exports had shown a reliable growth, while a deceleration in the share of cotton textile export is witnessed. The constant market share analysis indicated that the market size effect play a critical role in the export growth supplemented by competition effect. The opening of the markets had increased greater admittance to the world textile market and by improving and stimulating the capacity of processing sector.

Indian export sector has well defined comparative advantage in many labour intensive products like textile, gems, carpets and silk and has been able to exploit the benefits of trade in these respective product lines. However, Indian has not met with the growing pace of manufacturing sector as that of China. These studies also reveal that Indian exports grow in the world market mainly due to higher world trade that is being conducted each passing year, but meanwhile some low value products like vegetables and gums are showing higher rate of growth than other developed nations like USA, Canada and Europe. Ornamental fish are also in the comparative advantageous list as per the mentioned studies and growing demand is from well developed nations like Japan and Singapore and Germany. All these studies generally mention that, India enjoys comparative advantage mostly in low value added product lines and some labour intensive product groups.

However, there cannot be a uniform trend in the comparative advantage of products due to the dynamic structure of world, so it is necessary to undertake the next study that could reveal the present situation of the various product lines

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Chapter - 3

GROWTH AND COMPOSITION OF INDIA'S EXPORTS

3.1 Introduction

Economic growth and development is perhaps the most serious issue in every part of the world, which however neo-classical economists suggest that better export performance and open economic policies could make this objective to come true, e.g., through greater economies of scale through higher production and market capturing, greater capital utilization and rapid technological change due to more outward orientation. So export growth could play a supportive and foremost role in the economic development of the economies of both developed as well as developing countries. Exports are also important in the sense as they are used for the payments of imports that can't be produced at home and thus favourable conditions are created for BOP equilibrium. Indian exports have shown very impressive change since liberalization period and export sector is growing very smoothly in the world market. Indian economy has changed structurally since 1991 as the import led growth strategy has been replaced by the export led growth model. The opening up of Indian economy makes it more export friendly and an environment that could lead to rapid development became known for Indian economy. Since then, the Indian economy gained effective growth, GDP growth was more than 7 percent during the last decade. The share percentage of trade to GDP has increased from 13.3 percent in 1991-92 to 42.7 percent in 2013-14. India has become hub for foreign investments, both in Foreign Direct Investments (FDI's) as well Foreign Institutional Investments (FII's).

These opened economic policies have helped Indian production line to a greater extend and thus Indian export sector got momentum in the world market. Exports of India increased from very small amount of $31.70 billion in 1995 to a larger share of $336 billion in 2013. Share of exports to GDP of India has also increased very significantly from the beginning of liberalization period indicating the mounting importance of export sector to GDP. The growing GDP of India and high growth rate can be attributed to the growing trade and export sector of India. This chapter would focus on the trends, composition and growth and direction of Indian exports during the period 2001 to 2013.

For the analysis, chapter has been segregated into 6 sub sections each would be analyzing one each component. Section 3.2 gives an overview of Indian external

sector since 1995 to 2013; section 3.3 and 3.4 analyzes growth of India's exports vis-à-vis its imports and trade as well as share percentage in world exports respectively; section 3.5 show us the composition of commodities and their share percentage in world market; section 3.6 gives the direction of Indian exports since 1995 to 2013.

3.2 Overview of India's Trade Parameters

Table 3.2 shows various indicators that represent the external sector of Indian economy from 1995 to 2013.

Table 3.2

Overview of India's Trade Parameters

($bn)

Components	1995	2000	2007	2013
GDP	366.60	476.61	1238.70	1876.80
Imports	36.59	52.94	218.65	466.05
Exports	31.70	42.36	145.90	336.61
Trade (Imports + Exports)	68.29	95.30	364.55	802.66
Import/GDP	9.98	11.11	17.65	24.83
Export/GDP	8.65	8.89	11.78	17.94
Trade/GDP	18.63	20.00	29.43	42.77
Exports/ Trade	46.42	44.45	40.02	41.94
Imports/ Trade	53.58	55.55	59.98	58.06

Source: Calculated from UNCTADStat, United Nations Conference on Trade and Development
Note: Ratios are in percentage; Data related to the table is for calendar year

Table 3.2 enumerates that the GDP of India has shown a good increment from 1995 to 2013. The GDP of India has increased from $366.60 billion to $476.61 billion in 2000 and from 2000 it has gone up to $1238.70 billion in 2007 to $1876.80 billion in 2013. This is very impressive growth in GDP for Indian economy during the same period and the trend looks very bright towards future also. Imports and exports also show great change from 1995 to 2013. The value of imports has increased from $36.59 billion to $466.05 billion, about 12.7 times more in 2013 from 1995. A similar case is with the exports whose value have grown from $31.70 billion in 1995 to $145.90 billion in 2007 to $336.61 billion in 2013, about 10.62 times more in 2013

than that of 1995. Import to GDP ratio has increased from 9.98 percent to 24.83 percent during the period of 1995 to 2013 respectively. However, export to GDP ratio has increased from 8.65 percent to 17.94 percent only during the same period. The increasing trend of import to GDP ratio than that of Export to GDP ratio during the period is liable for the increasing import bill that India has bearded and still is bearing huge pressure of import bill. This also is responsible for continuous trade deficit of Indian economy. Trade has shown very impressive growth as it has increased from 18.63 percent in 1995 to 42.77 as percentage of GDP. These ratios, Trade to GDP ratio, Export to GDP ratio and Import to GDP ratio indicate that such components are showing mounting effect for Indian economic growth. It can also be concluded in the way, that India is more curious about opening up her economy and is integrating with the world economy very appropriately since the taken time period. The export to total trade ratio has changed from 46.42 percent in 1995 to 44.45 percent in 2000 to 40.02 in 2007 to 41.94 percent in 2013. The trend shows that exports share in total trade has been on decline from 46 percent in 1995 to 40 percent in 2007, and only slight increment has been from 2007 to 2013, i.e., it increased by only one percent. However, imports to total trade ratio has increased from 53.58 percent in 1995 to 55.55 percent in 2000 to 59.98 percent in 2007 to 58.06 percent in 2013. This increasing import to trade ratio on one side increases the import bill and trade deficit and on the other side BOP equilibrium is effected with declining Foreign exchange reserve, which could make Indian external sector to run out of exchange reserve, if imports increase at very higher rate than that of exports.

Thus it can be concluded that India has managed to increase the GDP of her economy by increasing openness of economy, however, more focus should be on exports than that of imports to move more swiftly in the global economy. The external sector of trade has improved quite lot during the period of 1995 to 2013 and the trend reveals that the sector has bright future and could perform well in coming years under satisfied global conditions.

3.3 Growth of India's Trade

The annual growth of components like exports and imports give a clear picture about the performance of these said components. Table 3.3 clearly shows that there has been quite good increase in the value of both imports as well as exports but annual

growth seems not very much impressive. Table illustrates annual growth between the time period of 2001 to 2013 and it is examined as;

Table 3.3

Annual Growth of India's Exports, Imports and Total Trade

($bn)

Year	Total Exports (1)	Total Imports (2)	Total Trade (1+2)	Annual growth of Exports	Annual growth of Imports	Annual growth of Total Trade
2001	43.88	50.67	94.55	-	-	-
2002	50.10	57.45	107.55	0.14	0.13	0.14
2003	59.36	72.43	131.79	0.18	0.26	0.23
2004	75.90	98.98	174.89	0.28	0.37	0.33
2005	100.35	140.86	241.21	0.32	0.42	0.38
2006	121.20	178.21	299.41	0.21	0.27	0.24
2007	145.90	218.65	364.54	0.20	0.23	0.22
2008	181.86	315.71	497.57	0.25	0.44	0.36
2009	176.77	266.40	443.17	-0.03	-0.16	-0.11
2010	220.41	350.03	570.44	0.25	0.31	0.29
2011	301.48	462.40	763.89	0.37	0.32	0.34
2012	289.56	488.98	778.54	-0.04	0.06	0.02
2013	336.61	466.05	802.66	0.16	-0.05	0.03

Source: UNCTADStat, United Nations Conference on Trade and Development.
Note: Data is of calendar year

Table 3.3 elucidates that the total export value have increased from $43.88 billion in 2001 to $100.35 billion in 2005 about 2.29 times more in 2005 than that of 2001. Imports show an increment of $50.67 billion to $140.86 billion about 2.78 times more during the same period. From 2006 to 2013 exports value grew from $121.20 billion to $336.61 billion respectively. However, there has been a sharp decline in 2009 and 2012 due to global financial crisis and European debt crisis that followed in these periods respectively. Imports also show an increment of $218.65 billion in 2006 to $466.05 billion in 2013. Annual growth remains very smooth and increasing during the period of 2001 to 2013, except few periods of 2009 and 2012 for exports and 2009 and 2013 for imports that show negative annual growth. Highest annual growth for exports is seen in 2011 which is 37 percent and the lowest percentage is for the year 2012 which is minus 4 percent. For imports, highest annual growth is for the year 2008 that shows 44 percent than the previous year, whereas the

lowest one is for 2009 that is minus 16 percent. Total trade growth has been highest in 2005 which is 38 percent and trade annual growth remains negative in 2009 about minus 11 percent.

It can be concluded that exports and imports have shown a tremendous increment in annual growth rates except few periods of crisis, the trend in these components of exports, imports and total trade show that Indian economy is very much curious about this sector and is making way for its growth and development through these components. Albeit, the growing integration with the globe is making India to follow the global suit of growth as is shown in the table. The effect of global recession periods of 2009 and 2012, where India has turned in negative growth rates is clearly indicating that India cannot separate her economy from the globe to make progress in her external sector.

3.4 Growth of India's Export vis-a-vis World Economy

The growth and trend of Indian exports since 2001 has been thoroughly examined in the table 3.4 as;

Table 3.4

Growth of India's exports and share percentage in world

($bn)

Year	Indian exports	World exports	Indian Share in world exports (%age)
2001	43.88	6140.31	0.71
2002	50.10	6443.87	0.78
2003	59.36	7502.09	0.79
2004	75.90	9177.97	0.83
2005	100.35	10458.11	0.96
2006	121.20	12115.14	1.00
2007	145.90	14002.79	1.04
2008	181.86	16129.80	1.13
2009	176.77	12517.14	1.41
2010	220.41	15241.23	1.45
2011	301.48	18312.98	1.65
2012	289.56	18375.06	1.58
2013	336.61	18851.49	1.78

Source: UNCTADStat, United Nations Conference on Trade and Development.

The value of export growth has increased from $43.88 billion in 2001 to $50.10 billion in 2002, i.e., almost 1.14 times more in 2002 than that of 2001. From

2003 to 2007, it has increased from $59.36 billion to $145.90 billion respectively, i.e., increment of about 2.46 times from 2003 to 2007. The exports increased from $181.86 billion in 2008 to $336.61 billion in 2013, i.e., 1.85 times more in 2013 than that of 2008. Overall exports since the time period of 2001 to 2013 has increased from $43.88 billion in later period to $336.61 billion in former period, which is about 7.67 times more in 2013 than that of in 2001. The value of world exports has also increased at an impressive rate, rose from $6140.31 billion in 2001 to $16129.80 billion in 2008 to $18851.49 billion in 2013, about 2.63 times more from 2001 to 2008 and from 2008 to 2013 it is about 1.17 times more in 2013 than the 2008 period.

The percentage share of Indian exports is examined clearly in the table 3.4 between the said periods. In 2001 India has export share of 0.71 percent in world exports, it increased to 1 percent in 2006, since then it has been increasing very slowly but smoothly. In 2007 the export share of India in world was 1.04 percent, increased to 1.65 percent in 2011 to 1.78 percent in 2013. However, in 2012 there has been a decline in 2012 to 1.58 percent from 1.65 during the previous year due to Greece debt crisis, as India had good number of export demand in developed Europe about 17 percent of Indian exports go to developed Europe. Besides this, it can be concluded India has registered a good numeric growth in exports accordingly with the increasing growth of global exports and smoothly joined in world export share at an increasing percentage.

3.5 Composition of India's Exports

Table 3.5 shows growth and trends of India's exports at broader level of SITC 1 digit classification from 2001 to 2013 at disaggregated time periods (See Appendix 2 for Classification). The growth and composition of India's exports and their percentage share in world in their respective groups is shown in the table. It is found that there has quite impressive growth of commodities like the value of SITC 0 (Food and Live Animals) has increased from $5.21 billion in 2001 to $33.57 billion in 2013 about 6.4 times more in 2013 than that of 2001 period. Similar is the case with other commodities that show high growth during the same period like SITC 3 (Mineral fuels, lubricants and related materials), SITC 5 (Chemicals and related products, n.e.s.), SITC 6 (Manufactured goods classified chiefly by material), SITC 7 (Machinery and transport equipment) and SITC 8 (Miscellaneous manufactured articles) product lines have huge change during then study period. SITC 3 (Mineral

fuels, lubricants and related materials) has increased about 32.36 times from 2001 to 2013; SITC 5 and 6 have increased about 8.3 and 5.22 times respectively from 2001 to 2013. SITC 7 (Machinery and transport equipment) and SITC 8 (Miscellaneous manufactured articles) have shown an increment of 12.23 times and 4.44 times respectively in 2013 than that of 2001. However, commodity lines like SITC 1 (Beverages and tobacco), SITC 4 (Animal and vegetable oils, fats and waxes) and SITC 9 (Commodities and transactions not classified elsewhere in SITC) did not show much progress with the increasing world trade. Trade share in world market is high for SITC 6 (Manufactured goods classified chiefly by material) as compared to other commodities. It has market share of 3.59 percent in the world and is followed by SITC 0 (Food and Live Animals) and SITC 2 (Crude materials, inedible, except fuels) respectively having world share percentage of 2.96 and 2.12. Other commodities did not show much high percentage comparatively to these items. Although, there has been weakness in capturing better market share of these commodities but it is known by the data that there has been smooth increments in the percentage share of every commodity from 2001 to 2013 as shown in the table except SITC 1, SITC 7 and SITC 9 that still have share percentage less than one in 2013 from 2001.

Table 3.5

Commodity wise growth and share percentage in world

($bn)

Items	India's export in 2001	India's export in 2007	India's export in 2008	India's export in 2013	India's Share percent-age in world 2001	India's Share percent-age in world 2007	India's Share percent-age in world 2008	India's Share percent-age in world 2013
SITC0	5.21	11.85	15.86	33.57	1.48	1.67	1.86	2.96
SITC1	0.19	0.51	0.78	1.32	0.33	0.46	0.64	0.89
SITC2	1.64	10.89	12.18	16.04	0.88	2.16	2.09	2.12
SITC3	2.15	23.62	32.85	69.57	0.36	1.17	1.15	2.04
SITC4	0.20	0.44	0.63	1.12	1.05	0.71	0.70	1.11
SITC5	4.75	16.36	20.45	39.43	0.80	1.11	1.22	1.95
SITC6	15.90	43.13	49.76	83.03	1.90	2.15	2.26	3.59
SITC7	3.77	16.47	24.67	46.10	0.15	0.33	0.45	0.76
SITC8	8.78	20.93	21.80	38.94	1.13	1.39	1.33	1.85
SITC9	0.00	0.00	0.01	2.47	0.00	0.01	0.01	0.82

Source: UNCTADStat, United Nations Conference on Trade and Development
Note: Data for commodity groups is of calendar year.

3.6 Direction of Indian Exports

The direction of Indian exports has shown a unique trend from 1995 to 2013. The export markets in 1995 for India have now been shifting and the share percentage going to those markets is declining in 2013. Table 3.6 shows the direction of Indian exports to different regions of the world economy from 1995 to 2013.

Table 3.6

Region wise Direction of India's exports in percentage share

Economic Region	1995	2000	2007	2013
Transition economies	3.59	2.38	1.14	1.18
Developed economies Europe	29.30	25.44	22.23	17.33
Developed Oceania	1.37	1.08	0.83	0.80
Eastern Africa	2.10	1.55	3.06	4.01
Middle Africa	0.16	0.17	0.34	0.42
Northern Africa	0.78	1.16	1.59	1.78
Southern Africa	1.07	0.75	1.50	1.81
Western Africa	1.12	1.54	2.04	2.10
Caribbean	0.06	0.18	0.14	0.37
Central America	0.29	0.68	0.59	0.88
South America	0.79	1.27	2.36	3.02
Eastern Asia	9.10	10.51	13.66	11.13
Southern Asia	5.96	4.50	6.64	6.63
South-eastern Asia	8.61	6.30	9.48	11.26
Western Asia	8.28	10.28	16.30	18.21
Developing Economies Oceania	0.01	0.05	0.04	0.04
Developed Economies America	18.33	23.49	14.62	13.15
Developed Economies Asia	7.65	5.54	3.29	3.37
Other Territories	0.01	0.00	0.00	0.00
Total Trade (%age)	98.57	96.87	99.85	97.48

Source: Calculated from UNCTADStat, United Nations Conference on Trade and Development
Note: Data given in the table is for calendar year

The regions defined above are classified under UNCTAD and the countries which these regions include are clearly elaborated in appendix 1.

Table 3.6 clearly enumerates that the percentage share of total Indian exports has been decreasing in the regions of Transition economies from 3.59 percent in 1995 to 1.18 percent in 2013; developed economies of Europe from 29.30 percent in 1995 to 22.23 in 2007 to 17.33 in 2013 about 1.69 times decline from 1995 to 2013.

Similar condition took place in Developed economies America, developed economies Oceania and developed economies Asia, in all these regions there has been a decline in the percentage share of Indian exports as shown in the table. The developed economies of America got 18.33 percent of India's total exports in 1995 but its share declined to 13.15 percent in 2013. Developed economies of Asia got share percentage of 7.65 in 1995 and declined to 3.37 percent in 2013. However, there has been an increase in the share percentage of Indian exports to the developing markets like eastern Asia, western Asia, south-eastern Asia and South America and African regions. Table also shows that there has been a huge increment of Indian exports to western Asia since 1995 as compared to other regions. The export share for western Asia was 8.28 percent in 1995, increased to 16.30 in 2008 and further increased to 18.21 percent in 2013. Most of the Asian regions have got an increasing share of total Indian exports along with African regions that are also getting an increasing share but lagging very behind than that of Asian regions. In nut shell, it can be concluded that Indian exports have shifted from developed western economies to developing Asian economies since the period of 1995 to 2013. Study also reveals that western Asia and other eastern regions are becoming most favoured nations (MFN's) for Indian exports.

3.7 Conclusion

Due to the implementation of open economic policies and economic reforms, Indian economy showed an impressive growth in every related component of her gross domestic product. Trade sector also benefitted from these open liberal policies and thus exports and imports show a mounting effect on India's GDP. After liberalization period, the export sector of India witnessed sharp changes in growth, direction and composition accordingly with the increasing world exports. Indian exports grew at an impressive annual growth of 16.96 percent from 2001 to 2013. As compared to world growth of exports, India has showed very high annual growth to

that of world exports. The growth in commodity groups is very smooth during the study period although small but increasing trend shows that it could do better in the future except few products like, SITC 1 (Beverages and tobacco), SITC 7 (Machinery and transport equipment) and SITC 9 (Commodities and transactions not classified elsewhere in SITC) that still are stagnant in world market.

The direction of Indian exports has been rapidly shifting from the developed economies towards the developing economies of the globe. The shift has been more to developing economies of South America as well as African continent. Western Asia is the most favoured region as per data; most of the Indian exports are going and growing towards that market. The developed economies of Europe and America are declining in share percentage of Indian exports and opposite is reflected by the study towards the Asian developing market. The direction towards these developing regions also shows a cleverly approach of Indian export sector. Because India can reap the benefits of the export sector in this demand growing market especially Western Asia.

The growing demand in these Asian markets could prove helpful for the Indian export sector as external demand is very necessary for export performance of any nation and Indian is therefore no exception. The higher absorption power in these growing Asian economies like UAE, Saudi Arabia, China and Hong Kong could make Indian exports to gain momentum not only in these markets but also for other regions, because external demand is very necessary to maintain competitive edge in the world markets. 'Look East Policy' and 'Act East Policy' given by the policy makers of India should be encouraged to get the benefit of high purchasing power of these economies and to capture the markets, economic external policies should be modified to increase the productive potential of exported industries and thus increment in the national income would apparently be the outcome.

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Chapter - 4

INDIA'S EXPORT COMPETITIVENESS: RCA APROACH

4.1 Introduction

The volume and structure of exports describe the export performance of any nation and portray the level of competitiveness in the international market of that particular economy (Borozan and Pfeifer, 2004). The world has witnessed a dramatic change in both the composition as well as volume of global trade during the past few decades. Liberalization of trade, technological advancements and rise in the national income has been the main determinants during these periods. Recently, the world economy is focusing on the competitiveness of exports that has become much attractive due to mounting amount of trade that is taking place nowadays. The concept of competitiveness includes both prices as well as non-price components, from the cost of production to the rate of exchange, all internal as well as external conditions are taken into consideration while competitiveness of products is concerned (Sharma, 1992).

Competitiveness has been defined as the set of institutions, factors and policies that determine the level of productivity of an economy (World Economic Forum, 2013-14). Export Competitiveness can then be elaborated from this definition as the policies and factors of any nation that enables the economy to expand their exports in the world market efficiently than their rival counterparts. So, both spreading out exports due to more production and selling out in different markets of world should be kept in mind while talking about Export Competitiveness. With more liberal policies regarding trade around the world has diverted more attention towards competitiveness and more emphasis is now being placed to promote export competitiveness (Prasad, 2004).

In the Indian context, export competitiveness can have a supportive role for economic growth and development through securing foreign exchange and meeting international payments. The export competitiveness is the result of domestic factor endowments, structure, production and economic policies that govern the economy. World demand is the main contributor for the export competitiveness of an economy, because, it can slow down the speed of export expansion if world demand is declining though the exports are competitive in nature. However, Indian export sector has shown a structural transformation since its policy of liberalization.

In the context of many on-going multilateral trade pacts of India, it has performed well in the market that it faced. Indian export sector is then worthwhile to be undertaken for the analysis, to see which of the Indian commodity has been maintaining its base in the world market and which of the commodities lost their competitive nature due to more global influence of high tech goods and other rival nations having similar export material.

The objective of this chapter is to analyse the competitiveness of Indian exports on commodity classification at HS 6 digit level, based on RCA approach. Owing to the methodology, this approach is further improvised to identify India's competitively positioned products, threatened product lines, emerging product lines (Tier I and II), weakly positioned lines (Tier I and II), so that a pattern of competitiveness can be judged and an analysis could be made for the time duration of 2001 to 2013. Section 4.2 elaborates the discussion as;

4.2 Export Competitiveness Product-wise

Competitively Positioned products

Out of total 5808 HS 6 digit level reported product lines in 2012-13, 924 of them have RCA indices that are greater than one and are still increasing, thus placing these items under the category of 'Competitively Positioned Products'. These items constitute about 15.91 percent out of the total reported product lines. Table 4.2 elucidates this very clearly which shows that out of the total competitive positioned products, 23.16 percent product lines are from the 'Textile and Textile Articles' (HS 50-63) followed by 'Chemical Products' (HS 28-38) that share 21.54 percent in total Competitive Positioned Products. Machinery and Mechanical Appliances (HS 84-85) and Base Metals and Articles (HS 72-83) follow then in this category with respective percentages of 10.82 and 10.06 each. Other product lines then follows in smaller percentages as can be seen from table 4.2. Hence it can be said, that industries of textiles, chemicals, base metals and articles and mechanical appliances are highlighting the profile of competitively positioned products, rest are lacking both economies of scale as well as scope. These product lines that show a higher percentage of competitively positioned products are crucial for Indian economy to gain advantage of growing world trade, so such product lines should be modified and given more focus to take advantage of competitive edge in the globe.

Table 4.2

RCA Profile and Product Grouping

Industry Category/ HS Code	CP	TPL	EP1	EP2	WP1	WP2
Animal & Animal Products (01-05)	46 (4.98)	11 (2.05)	15 (4.34)	102 (7.80)	7 (2.95)	103 (4.19)
Vegetable Products (06-14)	73 (7.90)	36 (6.70)	15 (4.34)	103 (7.88)	5 (2.11)	126 (5.13)
Animal & Vegetable Fats & oils (15)	3 (0.32)	2 (0.37)	3 (0.87)	9 (0.69)	3 (1.27)	33 (1.34)
Food Stuffs (16-24)	22 (2.38)	12 (2.23)	10 (2.89)	67 (5.13)	6 (2.53)	100 (4.07)
Mineral Products (25-27)	27 (2.92)	17 (3.17)	7 (2.02)	24 (1.84)	10 (4.22)	80 (3.26)
Chemical Products (28-38)	199 (21.54)	95 (17.69)	63 (18.21)	153 (11.71)	36 (15.19)	335 (13.63)
Plastics and rubber (39-40)	31 (3.35)	16 (2.98)	19 (5.49)	39 (2.98)	12 (5.06)	110 (4.48)
Tides and Skins (41-43)	8 (0.87)	9 (1.68)	4 (1.16)	12 (0.92)	3 (1.27)	62 (2.52)
Wood and wood products (44-46)	6 (0.65)	0 (0.0)	3 (0.87)	53 (4.06)	1 (0.42)	56 (2.28)
Wood pulp products (47-49)	10 (1.08)	5 (0.93)	6 (1.73)	48 (3.67)	1 (0.42)	107 (4.35)
Textiles and Textile Articles (50-63)	214 (23.16)	186 (34.6)	38 (10.98)	79 (6.04)	57 (24.05)	323 (13.15)
Footwear and Headgear (64-67)	6 (0.65)	9 (1.68)	3 (0.87)	12 (0.92)	1 (0.42)	25 (1.02)
Article of Stone, Plaster, Cement & Mica (68-70)	26 (2.81)	11 (2.05)	6 (1.73)	44 (3.37)	4 (1.69)	77 (3.13)
Pearls, Precious or semi-Precious Stones, Metals (71)	10 (1.08)	8 (1.49)	1 (0.29)	10 (0.77)	1 (0.42)	23 (0.94)
Base Metal and Articles (72-83)	93 (10.06)	58 (10.80)	47 (13.58)	107 (8.19)	39 (16.46)	271 (11.03)
Machinery & Mechanical Appliances (84-85)	100 (10.82)	34 (6.33)	70 (20.23)	267 (20.43)	37 (15.61)	373 (15.18)
Transportation Equipment (86-89)	22 (2.38)	11 (2.05)	8 (2.31)	48 (3.67)	2 (0.84)	45 (1.83)
Measuring & Musical Instrument (90-92)	14 (1.52)	8 (1.49)	13 (3.76)	81 (6.20)	8 (3.38)	126 (5.13)
Arms & Ammunition (93)	4 (0.43)	0 (0.0)	1 (0.29)	3 (0.23)	0 (0.0)	15 (0.61)
Miscellaneous Products (94-96)	9 (0.97)	8 (1.49)	14 (4.05)	44 (3.37)	4 (1.69)	63 (2.56)
Work of Art, Collector's Piece & Antiques (97-98)	1 (0.11)	1 (0.19)	0 (0.0)	2 (0.15)	0 (0.0)	3 (0.12)
Services (99)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.04)
Total	924 (100)	537 (100)	346 (100)	1307 (100)	237 (100)	2457 (100)

Source: UNCOMTRADE

Calculations by the Researcher

Note; Numbers in parenthesis are percentage shares in the respective product line.

Notes: CP= Competitive Positioned Products; TPL= Threatened Product lines; EP1= Emerging Product Tier I; EP2= Emerging Product Tier II; WP1= Weakly Positioned Product (Tier I) & WP2= Weakly Positioned Product (Tier II).

Threatened Product Lines

In this case, there are total of 537 product lines out of total 5808, showing percentage share of 9.24 as shown in table 4.2. These product lines show revealed comparative advantage, but have experienced a declining share in world market during 2012-13 (Table 4.2). However, it is important to note that 34.6 percent product lines out of total 'Threatened Product Lines' are form Textiles and Textile Articles, followed by Chemical Products that show 17.69 percent of threatened products. Other declining product sectors include base metals and articles (10.80 percent) and machinery and mechanical appliances (6.33 percent). Others follow the same way but in smaller percentage. This indicates that besides higher percentage of competitive products in these product lines, there exist a higher percentage of threatened products also, which could be an alarming situation for the competitiveness in coming years for Indian export sector. So these product lines of textile and chemicals should be taken care of to survive in the market in near future.

Emerging Products: Tier I

In the category of 'Emerging Products' are those product lines that show comparative disadvantage at present but show a inclining trend from some past years in the world market and are thus making way to become eligible for competitive product groups. These are subdivided into two sections owing to methodology; Tier 1 and Tier 2.

In the first category of Tier 1, there are total of 346 product lines that exhibit a percentage of 5.96 out of total reported product lines. However, in this category, the top most shares is for Machinery and Mechanical Appliances (HS 84-85) that have emerging percentage of 20.23 out of total Emerging Products of Tier 1. The followers are Chemical products that have 18.21 percent share, followed by base metals and articles (13.58 percent) and so on as shown in table 4.2. This can be said that Indian manufacturing is moving towards to high value added technical product lines of machinery and chemical products. These product groups that show higher percentage in emerging category are thus showing a positive trend towards gaining competitiveness in coming time. So, need is to focus on these products to make India a competitive performer in near future.

Emerging Products: Tier II

In this category fall some 1307 product lines out of total product sector. In this category are those that show improvement over few years but their comparative advantage is still less than 0.5. Table 4.2 shows very clearly the number and percentage of respective product lines that fall in this category. The top three product lines that are in this group are Machinery and Mechanical Appliances (20.43 percent); Chemical Products (11.71 percent) and Base Metal and Articles (8.19 percent). As these product lines are very emerging in the competitiveness of Indian export sector (both in Tier I and Tier II), so these are the product categories that India should cautiously investigate for higher potentiality and competency in the world market.

Weakly Positioned Products: Tier 1

Weakly Positioned Products are categorized into two different sub groups; Tier I and Tier II. The RCA indices for Tier I is less than one but greater than 0.5 and have experienced negative growth in the market for 2012-13. In this category of 'Tier I' are included 237 product lines that represent 4.08 percent of total product lines as shown in the table 4.2. However, in this category the highest share is for Textile and Textile Articles (24.05 percent), followed by Base Metal and Articles (16.46 percent); Chemical Products (15.19 percent) and Machinery and Mechanical Appliances that are 15.61 percent out of total Weakly Positioned Products of Tier I.

Weakly positioned Products: Tier II

This group has total of 2457 product lines and thus have a percentage of 42.30 out of total product lines. In this category are those products that reveal RCA index as less than 0.5, this show a worsening comparative disadvantage. Table 4.2 clearly shows the overall number and percentage of the product lines that fell in this group. The highest numbers of products in this category are from Machinery and Mechanical Appliances (15.18 percent), followed by Chemical Products (13.63 percent); Textiles and Textile Articles (13.15 percent) and Base Metals and Articles (11.03 percent). These product lines need more careful examination for their new set up in the world market, so that these could become eligible for export competitive group for India.

Thus it can be concluded that India has only four main product lines that exhibit comparative advantage and still need to be much examined for survival in the world market, as there are more competitors in the same field like Bangladesh and Pakistan are both very good at textile products, China in machinery and mechanical

products and so on. So, further micro level investigation is required to check those product lines that have highest potential to achieve and maintain the international export competitiveness.

4.3 Competitive Positioning of Selected Product Lines

In this section changes and pattern of selected top sectors would be analyzed. The changing behaviour in the indices of their RCA from 2001 to 2013 would be studied with a brief description for each of these product lines.

Textile and Textile Articles (50-63)

The total number of reported product lines for this group was 796 in the year 2001. The number of products that had RCA index greater than one were 455 and with RCA less than unity were 341 having a percentage of 57.16 and 42.83 respectively out of total product lines of the concerned group in that particular period as shown in the table 4.3;

Table 4.3

Table Profile of Textile & Textile Articles (50-63)

Description	2001	2013	Change (2001-13)
Total Reported Product lines	796	770	3.26%
Product lines with RCA > 1	455 *(57.16)*	378 *(49.09)*	-16.92%
Product Lines having RCA < 1	341 *(42.83)*	392 *(50.91)*	14.95%

Source: Researcher's Calculation based on UNCOMTRADE data.
Note: Numbers in parenthesis are percentages out of total reported lines of respective group in concerned year.

The above table shows transformation of this particular product line from comparatively advantageous moving towards comparative disadvantageous category. As there has been a negative change of 16.92 percent for competitive product of textiles from 2001 to 2013 and a positive change of 14.95 percent in those commodities having RCA index less than unity during the same period. However, there could be some emerging percentage also in the category of products having RCA less than unity, so further description is needed which is reflected in the table 4.31.

Table 4.31 shows, only 23.86 percent out of total reported lines of this product category belong to competitive positioned products and most percentage is for weakly

positioned product categories 36 percent and 6.35 percent for Tier II and Tier I respectively.

Table 4.31

RCA Profile of Textile and Textile Articles (HS 50-63)

Product Category	CP	TPL	EP1	EP2	WP1	WP2	Total
HS 50-63	214 *(23.86)*	186 *(20.74)*	38 *(4.24)*	79 *(8.81)*	57 *(6.35)*	323 *(36.01)*	897 *(100)*

Source: Researcher's Calculation.
Notes: Numbers in parenthesis are percentages out of total reported product group.

Threatened Product lines show a percentage of 20.74 and only some 13 percent products belong to 'Emerging Products' (Tier I and Tier II) out of this total product group. It can thus be concluded that this product line is moving towards comparative disadvantage category as more of its percentage lies with the weakly and threatened products and also the negative change of its products with RCA greater than one from 2001 to 2013 and positive change of those products with RCA less than one imply that it can pose a threat to this industry in coming years if not checked.

Chemical Products (HS 28-38)

The total numbers of reported product lines for this group in 2001 were 730, out of which 245 products had RCA index greater than unity and 485 were having RCA index less than one. These products were sharing a percentage of 33.56 and 66.44 each out of total reported Chemical products as shown in table 4.32.

Table 4.32

Table Profile of Chemical products (HS 28-38)

Description	2001	2013	Change (2001-13)
Total Reported Product Lines	730	738	1.09%
Products with RCA > 1	245*(33.56)*	278 *(37.67)*	13.47%
Products with RCA < 1	485 *(66.44)*	460 *(63.33)*	-5.15%

Source: Researcher's Calculations
Note: Numbers in parenthesis are percentages of product category out of its total product line.

However, in 2013 reported product lines increased by positive 1.09 percent from 2001 and more significantly those product lines with RCA greater than one

shown a positive change of 13.47 percent from 2001 to 2013, side by side a decline of 5.15 percent was seen in products having RCA index less than one in the same period. In 2013 the Competitive Positioned Products of this category are 37.67 percent out of its total content, while 63.33 percent still remains in the comparative disadvantageous position for the same year. The data shows that there has been a positive change for the product groups that fell in the Competitive Positioned Product line for this category, and a good sign is that products with RCA less than unity are showing a declining trend from 2001 to 2013, implies that India is moving towards gaining the competitive edge for this product line of HS 28-38, i.e., Chemical products. There are also some emerging products from past few years in this category which are broadly elaborated in table 4.33.

Table 4.33

RCA Profile of Chemical Products (HS 28-38)

Product Category	CP	TPL	EP1	EP2	WP1	WP2	Total
HS 28-38	199 *(22.59)*	95 *(10.78)*	63 *(7.15)*	153 *(17.37)*	36 *(4.09)*	335 *(38.02)*	881 *(100)*

Source: Researcher's Calculation
Note: Figures in parenthesis are percentage share in that product line

Out of total reported product lines of Chemical Products in 2012-13, Competitive positioned Product lines were 22.59 percent, headed by Weakly Positioned Products of Tier II that had a share of 38.02 percent. Beside this, there are emerging products also that show a percentage of 7.15 and 17.37 for Tier I and Tier II for emerging product line respectively. From table 4.32 and 4.33, it can be concluded that Indian chemical industry is having a competitive edge in the future also, as its share is increasing in the competitive positioned and emerging products whereas, weakly positioned product lines are showing a declining trend, which is a positive sign for the export competitiveness for India in these product lines.

Machinery and Mechanical Appliances (HS 84-85)

The sector of 'Machinery and Mechanical Appliances' (HS 84-85) is illustrated in table 4.34. This sector contained 780 reported items in total in 2001, out of which competitive positioned products were only 110 that show RCA index more

than one in the same period. The percentage share of these product lines having RCA index greater than unity in 2001 was 14.10 out of total reported product lines of this group as shown in the table 4.34.

The comparative disadvantageous product lines were 670 making a percentage of 85.89 out of total product group for the same duration of 2001. Table 4.34 elaborates more appropriately the changing pattern of HS 84-85 product line in its comparative advantage. There has been a decline of 1.92 percent for total product line from 2001 to 2013, but competitive positioned products have shown an increment of 13.64 percent during the same period.

Table 4.34

Table profile of Machinery & Mechanical Appliances (HS 84-85)

Description	2001	2013	Change (2001-13)
Total Reported Product Lines	780	765	-1.92%
Products with RCA >1	110 *(14.10)*	125 *(16.34)*	13.64%
Product lines with RCA < 1	670 *(85.90)*	640 *(83.66)*	-4.47%

Source: Researcher's Calculation
Note: Figures in parenthesis are percentage share in that product line

However, it is found that the decreasing percentage of 4.47 percent for disadvantageous products and meanwhile increments in products having RCA index greater than one is somehow making the way towards competitiveness and is further illustrated in table 4.35 as;

Table 4.35

RCA Profile of Machinery and Mechanical Appliances (HS 84-85)

Product Category	CP	TPL	EP1	EP2	WP1	WP2	Total
HS 84-85	100 *(11.35)*	34 *(3.86)*	70 *(7.95)*	267 *(30.31)*	37 *(4.20)*	373 *(42.34)*	881 *(100)*

Source: Researcher's Calculation
Note: Figures in parenthesis are percentage share in that product line

Table 4.35 gives an illustrative view for HS 84-85 product categories and makes it clear that besides its competitive positioned product percentage of 11.35 out of its total content. This product category possesses an emerging product percentage

of 38 which indicates that this sector is moving towards competitiveness and should be focused on. However, there are also a greater percentage of weakly positioned products that could be an alarming situation for the competitiveness of this product line if not checked with care. From table 4.34 & 4.35, it can be concluded that Machinery and Mechanical Appliances have a good future for Indian exports, as their share of competitive positioned products are showing an increasing trend from 2001 to 2013, side by side emerging product lines are also on rise and simultaneously decreasing percentage of weakly positioned product lines during the same period indicates the movement towards competitive behaviour in the world market.

Base Metal and Articles HS (72-83)

Total numbers of reported product lines belonging to this group were 545 in 2001, in which the competitive positioned products that had RCA index greater than one were 165 in number having a share of 30.27 percent in total reported lines of this category. Similarly, product lines that had RCA less than one during the same period were 380 in total, sharing a percentage of 69.73 out of total group. This is elucidated in table 4.36.

Table 4.36

Table Profile of Base Metal & Articles (HS 72-83)

Description	2001	2013	Change (2001-13)
Total Reported Product Lines	545	550	0.92%
Products with RCA > 1	165 *(30.27)*	144 *(26.18)*	-12.73%
Products with RCA < 1	380 *(69.73)*	406 *(73.82)*	6.84%

Source: Researcher's calculation
Note: Figures in parenthesis are percentage share in that product line

In 2013, there has been an increment of 0.92 percent in total reported products of this category; however, competitive positioned products had a negative 12.73 percent change in 2013 from 2001. There has been a positive increase of 6.84 percent in the comparative disadvantageous product line for the same period. There could be however some emerging products also in disadvantageous category so further analysis is required, which is elaborated in the table 4.37.

Table 4.37 shows that product group of HS 72-83 has 15.12 percent of products as competitive positioned out of its total content in 2013-13, whereas there is an increasing share of weakly positioned products accounting about 50 percent for both Tier I and Tier II as shown in table.

Table 4.37

RCA Profile of Base Metal and Articles (HS72-83)

Product Category	CPL	TPL	EP1	EP2	WP1	WP2	Total
HS 72-83	93 *(15.12)*	58 *(9.43)*	47 *(7.64)*	107 *(17.40)*	39 *(6.34)*	271 *(44.07)*	615 *(100)*

Source: Researcher's Calculation
Note: Figures in parenthesis are percentage share in that product line

Emerging products also do not show any much significant share, as only about 25 percent is accounted for emerging category both Tier I and II as compared to Threatened and Weakly Positioned Products. So, it can be concluded from table 4.36 and 4.37 that this product group is moving towards comparative disadvantage from 2001 to 2013, as the products with RCA indices less than one are showing a positive trend during the same phase and thus needs a special care to be in the competitive category.

Mineral products (HS 25-27)

The table description of Mineral Products (HS 25-27) is shown in table 4.38. Total reported product lines for this group were 117 in 2001 and has increased by 13.67 percent to 133 in 2013.

Table 4.38

Table Profile of Mineral Products (HS 25-27)

Description	2001	2013	Change (2100-13)
Total Reported Product Lines	117	133	13.67%
Product line with RCA > 1	47*(40.17)*	43 *(32.33)*	-8.51%
Products with RCA < 1	70 *(59.83)*	90 *(67.67)*	28.57%

Source: Researcher's Calculation
Note: Numbers in Parenthesis are percentages of respective groups in total product line.

Table 4.38 shows that 40.17 percent products were competitive positioned in 2001 out of this product group and 59.83 percent were having RCA index less than one during the same period. Competitive positioned products show a decline of 8.51 percent from 2001 to 2013, however, products with RCA less than one has increased by 28.57 percent. The increasing percentage of such products shows that India is losing its competitive edge over such products and is illustrated further in table 4.39. Table gives clear picture about the product category of HS 25-27, showing that there are 16.36 percent of products in Competitive Positioned category out of its total content in 2012-13. Threatened Product lines are 10.30 percent and Weakly Positioned Products constitute 54.54 percent out of this product group.

Table 4.39

RCA Profile of Mineral Products (HS 25-27)

Product Category	CPL	TPL	EP1	EP2	WP1	WP2	Total
HS 25-27	27 *(16.36)*	17 *(10.30)*	7 *(4.24)*	24 *(14.55)*	10 *(6.06)*	80 *(48.48)*	165 *(100)*

Source: Researcher's Calculation
Note: Figures in parenthesis are percentage share in that product line

However, there is no big percentage of emerging products, only about 31 percent which is very less comparable to its weakly positioned content, indicating that India is losing the competitive edge in this product line each passing year as illustrated by table 4.38 and 4.39.

Transportation Equipment (HS 86-89)

Description about Transportation equipment product line is illustrated in table 4.40.

Table 4.40

Table Profile of Transportation Equipment (HS 86-89)

Description	2001	2013	Change (2001-13)
Total Reported Product Lines	108	125	15.74%
Products with RCA > 1	24 *(22.22)*	30 *(24)*	25%
Products with RCA < 1	84 *(77.78)*	95 *(76)*	13.09%

Source: Researcher's Calculation
Figures in parenthesis are percentage share in that product line

In 2001, this product line had some 108 total reported products out of which 22.22 percent were competitive positioned and rest were having RCA index less than one as shown in table 4.40. However, there has been a positive increment of 15.74 percent from 2001 to 2013 in total product group, and, competitive positioned products have increased to 30 in 2013 from 24 in 2001 showing an increment of 25 percent. But, products with RCA index less than unity also increased by 13.09 percent; however, there could be some emerging products also in this category, so table 4.41 would give more illustrative picture.

Table 4.41

RCA Profile of Transportation Equipment (HS 86-89)

Product Category	CP	TPL	EP1	EP2	WP1	WP2	Total
HS 86-89	22 *(16.18)*	11 *(8.09)*	8 *(5.88)*	48 *(35.29)*	2 *(1.47)*	45 *(33.09)*	136 *(100)*

Source: Researcher's Calculation
Note: Figures in parenthesis are percentage share in that product line

Total products of competitive positioned nature are 22 out of total content of this group sharing a percentage of 16.18. Weakly positioned products are having a share of 34.56 percent whereas, emerging products show a good percentage of 41.17 compared to other categories, indicating an improvement over gaining the competitive edge. From table 4.40 and 4.41, it can be concluded that India is moving towards capturing the competitive edge in world market for this product line in future.

Vegetable Products (HS 06-14)

Total numbers of reported product lines for this category in 2001 were 225, out of which 78 products were 'Competitive Positioned' having a share of 34.67 percent in this total group and products with RCA less than unity during the same period were 147 having a share of 65.33 percent in the total product group as shown in table 4.42.

However, there has been a positive change of 24.88 percent in total product category from 2001 to 2013 but the share percentage of Competitive Positioned products have declined in 2013 having only 31.32 percent share in total group as compared to 34.67 percent during 2001, besides its increment to 88 products from 78 in 2013 from 2001.

Table 4.42

Table Profile of Vegetable Products (HS 06-14)

Description	2001	2013	Change (2001-13)
Total Reported Product Lines	225	281	24.88%
Products with RCA > 1	78 *(34.67)*	88 *(31.32)*	12.82%
Products with RCA < 1	147*(65.33)*	193 *(68.68)*	31.29%

Source: Researcher's Calculations
Note: Figures in parenthesis are percentage share in that product line

Also, there has been increment in products having RCA less than unity by 31.29 percent and an increasing percentage in total group by 68.68 percent in 2013 as compared to 65.33 percent during 2001. Table 4.43 gives the illustrative view of products in this category having RCA less than one.

Table 4.43

RCA Profile of Vegetable Products (HS 06-14)

Product Category	CP	TPL	EP1	EP2	WP1	WP2	Total
HS 06-14	73 *(20.39)*	36 *(10.06)*	15 *(4.19)*	103 *(28.77)*	5 *(1.40)*	126 *(35.20)*	358 *(100)*

Source: Researcher's Calculation
Note: Figures in parenthesis are percentage share in that product line

Out of total group 20.39 percent are Competitive Positioned products whereas Weakly Positioned products share a percentage of 36.60 both for Tier I and Tier II. There are some products having RCA less than one but exhibit emerging prospectus; these products have a share of 32.96 percent in total product group. So it can concluded from table 4.42 and 4.43, that this product line, besides increasing in number of emerging products has also got momentum in the products that are having RCA index less than one or simply disadvantageous products.

Measuring and Musical Instruments (HS 90-92)

There are total of 208 product lines in this category in 2013 declined by 7.55 percent from 225 product lines in 2001. Percentage share of products with RCA greater than one in 2001 were 11.55 and declined to 7.21 percent in 2013 out of total product group. There has been a decline of 42.31 percent in overall products of

Competitive Positioned category having RCA greater than one from 2001 to 2013. Similarly products with RCA less than unity have declined in overall percentage by 3.01 percent during 2001 to 2013 but there has been an increasing share of 92.79 percent in total product group in 2013 from 88.44 percent during 2001 as shown in table 4.44.

Table 4.44

Table Profile of Measuring and Musical Instruments (HS 90-92)

Description	2001	2013	Change (2001-13)
Total Reported Product lines	225	208	-7.55%
Products with RCA > 1	26 *(11.55)*	15 *(7.21)*	-42.31%
Products with RCA < 1	199 *(88.44)*	193 *(92.79)*	-3.01%

Source: Researcher's Calculation
Note: Numbers in parenthesis are percentages of respective category out of its total group

There are however some emerging products also in the category of products having RCA less than one which are still included in comparative disadvantageous products but there share is rising from past few years in the world market. So, further analysis is done in table 4.45. It shows that there are only 5.60 percent of products falling in the Competitive Positioned Products out of its total content, whereas, there is an increasing percentage of 53.60 for Weakly Positioned Products (Tier I plus Tier II). Emerging Products also have 37.60 percent share in total group but as compared to Weakly Positioned Products there is lot to be done for this product line. From both the tables 4.44 and 4.45, it can be concluded that this product line has more of comparative disadvantageous products, but somehow has increasing share of emerging percentage also. So, further analysis is required to check out its potentiality in the world market to grab the opportunity of becoming the competitive in nature.

Table 4.45

RCA Profile of Measuring and Musical Instruments (HS 90-92)

Product category	CP	TPL	EP1	EP2	WP1	WP2	Total
HS 90- 92	14 *(5.60)*	8 *(3.20)*	13 *(5.20)*	81 *(32.40)*	8 *(3.20)*	126 *(50.40)*	250 *(100)*

Source: Researcher's Calculation
Note: Figures in parenthesis are percentage share in that product line

4.4 Conclusion

The study reveals that most of the major product sectors of India like Textile, Base Metals and Mineral Products all are showing a declining trend in their competitiveness in world market. The Textile Sector that contributes about 15 percent to total reported product lines at HS 6 digit level has to be guarded, as increasing competitive pressure from the other producers of similar product category like China, Pakistan and Bangladesh could be detrimental in future for this export industry of India. However, there has been a positive change for some sectors like Chemicals and Transportation Equipments which means that Indian export sector is gaining advantage in the more value added products which is a good sign for future to be in the competition in the world market. But, within the overall export profile of India, there is no uniform trend in the 'Competitive Positioned Product' line and more obvious is that there has been a significant decline in such products for most of the dominant sectors. Simultaneously emerging products are showing momentum in product categories of chemicals, machinery and mechanical appliances, thus focus should be given to such product lines as future could be apparent in these exported products in the world market. To remain in the competitiveness, India should look upon those products that are gaining comparative advantage during the study period and also products with higher percentage of emerging product lines should be keenly held as a competitive threat is always there from low wage neighbouring economies like China which is a threat for Indian export competitive structure. Thus to achieve competitiveness in this rapidly globalizing world, India would require much efforts at both micro as well as macro levels.

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Chapter - 5

EXPORT PERFORMANCE OF INDIA: CONSTANT MARKET SHARE ANALYSIS

5.1 Introduction

Exports impressively affect the growth rates of economies and thus occupy a special role in their development processes. Exports not only contribute for economic growth through increasing production but also through exchanging technical knowhow, better machinery, spreading new ideas and innovations. Besides this exports help in reducing the macro economic problems of any country through increasing employment opportunities and reducing external debt that is faced by the concerned nation. Hence it can be concluded that exports have an impressive impact and play an imperative role for the development of the economies. However, for export sector to grow both internal as well as external factors are necessary (Nayyar, 1976). The factors that influences the export performance of any nation are as; (i) world demand of products; (ii) changing structure in the commodity composition of exports; (iii) changing pattern of exports regarding the market distribution; (iv) changes in the competitiveness of exports which depend on both price as well as non-price factors like quality, advertising, brand name etc and relative prices of the products which is most important and the last one (v) absorption capacity of foreign market or their purchasing power capacity to absorb the exports of the concerned nation. The said factors are very important in determining the export performance, like a country cannot perform well in her exports if the world demand is stagnant, similarly if the country cannot manage to change the pattern of commodities that are demanded by the global market, it becomes difficult for her to reap the benefits of growing world trade. Market distribution, competitiveness and purchasing power capacity of foreigners also play a vital role for the export performance, because country should export to those markets where there is demand and both price and non-price factors should be kept in mind due to influence of many similar competitors in the concerned market. So, all these factors are interrelated and thus demonstrate the export performance of any nation.

In Indian context, it is worthwhile to undertake such analysis, because Indian export sector has shown a tremendous change since the last decade. So, a detailed study on Indian export performance during 2001 to 2013 would be done in this

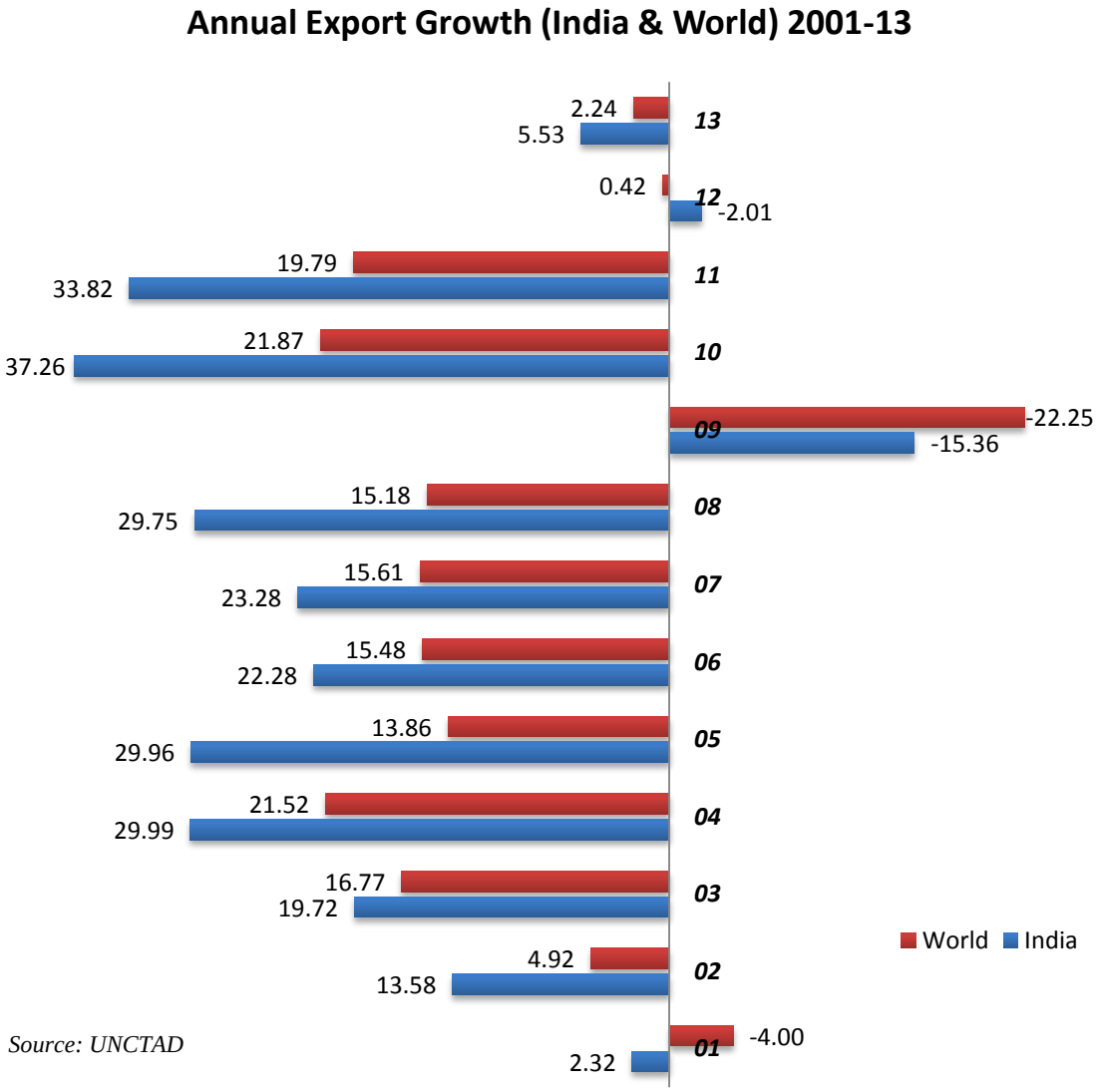
chapter. The export growth that India has shown would be analyzed in four different effects using 'Constant Market Share' (CMS) model and the effects are; 'world demand effect' which shows that whether, Indian exports have grown or stagnated due to the world market conditions or how world market demanded the exported goods and commodities of Indian origin. In this way other factor for export growth could be that Indian exports could have been driven by those commodities that have a good demand from world which is known to be 'commodity composition effect'. Similarly, other reason for export growth could be due to 'market distribution effect' which is exporting to those markets which have greater demand for products of Indian origin. In a similar manner other effect includes both price as well as non price factors that contribute for export growth which is known as 'competitiveness effect'. The analysis would be done on two separate time periods of pre recession, i.e., 2001-07 and post-recession period of 2008-13 and overall performance during time frame of 2001 to 2013 would also be taken into consideration.

5.2 India's Export Performance

Exports in India have grown at a good speed accordingly with the world exports since 2001. The share of Indian exports in world total exports has also risen from 0.71 percent in 2001 to 1.78 percent in 2013 as already discussed in chapter three. However, due to global financial crisis in 2008 there had been a decline in the Indian exports from $181.86 billion in 2008 to $176 billion in 2009 and further due to European debt crisis, year 2012 recorded a decline in export growth to $289.56 billion from $301.48 billion during previous year.

Indian export growth has been quite high since 2001 with respect to the world except in 2012 where Indian exports are showing a small decline than world exports due to the European debt crisis, that mainly occurs due to a reasonable share of export percentage of India with that region, more than 17 percent of total exports of India go to the European developed market. The whole scenario is appropriately illustrated in a graph (Fig. 5.2), that shows annual export growth rate of India to that of world annual growth of exports since 2001 to 2013. The trend of export growth during the period depicts that Indian export growth was quite high as compared to world export growth. However, huge negative decline is there during 2009 due to the global financial crisis and also negative growth is depicted during 2012 due to debt crisis of Europe, and is demonstrated appropriately in the Fig. 5.2

Fig. 5.2



However, there are certain questions regarding the export growth of India which this chapter is going to answer, which are as; (i) Was it world growing trade that make Indian export sector to expand in structure and composition (World Demand Effect)?; (ii) Did Indian exported commodities had a better demand in world market which was responsible for higher growth (Commodity Composition Effect)?; (iii) Was growth due to the market distribution effect, that India had maintained in exporting to those market who had higher absorption power or purchasing power as compared to world market (Market Distribution Effect)?; (iv) Is the competitiveness of Indian exports responsible for their increasing growth in the world market during the period (Competitiveness Effect)? Because, these effects have a vital role to play in the growth of exports of any nation, so does with India. The study period covered for

this analysis is from 2001 to 2013 and to capture the effect of global financial crisis, the whole study of 'Constant Market Share' analysis is divided into two phases;

CMS of Period 2001-13

	Phase I	Phase II	Overall
Period	2001-07	2008-13	2001-13

Intention of the above time period division is to capture the affect of global financial crisis (2007-08) on India's export competitiveness, i.e., effect on Indian exports in terms of World Demand Effect, Market Distribution Effect, Commodity Composition Effect and Competitiveness Effect.

5.3 Indian Export Growth Decomposition

Export growth of India is elaborated in separate phases, Phase I (2001-07) reflects the period before global financial crisis, phase II (008-13) gives illustrative view of Post recession period and then overall (2001-13) export performance is analysed. Table 5.3 gives an illustrative picture of Indian export growth during the same separate phases as mentioned.

Table 5.3

Growth decomposition of Indian exports in different phases

($bn)

Year	ΔX	WDE	CCE	MDE	CE
Phase I	102.02	5421.4	-471	6455.9	-11304.3
(2001-07)	*(100)*	*(53.14)*	*(-4.62)*	*(63.28)*	*(-110.8)*
Phase II	154.75	2880.85	2022.12	16436.25	-21184.47
(2008-13)	*(100)*	*(18.62)*	*(13.07)*	*(106.21)*	*(-136.9)*
Overall	292.73	8675.42	711.31	18298.31	-27392.32
(2001-13)	*(100)*	*(29.64)*	*(2.43)*	*(62.51)*	*(-93.58)*

Source: Calculation based on UNCTAD data.
Note: ΔX= Actual change in Indian exports; WDE= World Demand Effect; CCE= Commodity Composition Effect; MDE= Market Distribution Effect and CE= Competitiveness Effect.

Indian exports grew by actual value of $102.02 billion from 2001 to 2007 when world exports were growing at the tune of $5421.4 billion. It means that if Indian had maintained the world growth then India would have increased their exports by $5421.4 billion during the same period. Albeit, this increase in Indian exports can be attributed to higher Market Distribution effect (63.28 percent), followed by World Demand Effect (53.14 percent).

However, there has been wrong selection of commodities, which is reflected by the negative value of minus $471 billion during the same period as shown in table 5.3. Indian exports also show negative Competitiveness Effect (-110.8 percent) during phase I, which means that during pre-recession period, Indian exports show an improvement of many billion dollars only due to the other two factors rather than Competitiveness and Commodity Composition factor, which were both missing during the period of pre-recession.

Post-recession period of 2008 to 2013 showed that Indian exports increased by $154.75 billion and would have increased by $2880.85 billion if India had maintained efficiently in the world market as shown in table. World Demand Effect remains low at 18.62 percent during this period due to global financial crisis followed by European debt crisis. The growth in Indian exports is then purely attributed to the high market distribution effect (106.21 percent) during the period. India has maintained her export base towards such markets which were showing high absorption power than world average, so Indian exports had been supplied to those markets where demand was quite high and the absorption power was very significant than the world average. Besides this, there has been also a significant change in commodities selection from pre-recession to post-recession period; Commodity Composition effect has been calculated at $2022.12 billion in 2008-2013, which shows an improvement than the previous phase of study, as it shares 13 percent of export growth during the post-recession period. However, Competitiveness effect still remains negative at minus 136.09 percent, which indicates that India still didn't succeed in capturing the competitive edge over its exported products in both price as well as non price components. The growth of exports in post-recession period has also been due to Market Distribution effect and World Demand Effect plus Commodity Composition Effect in this period than that of pre-recession.

The overall growth of Indian exports from 2001 to 2013 is also shown in table where, growth of exports is mainly attributed to Market Distribution effect (62.51 percent), followed by World Demand effect (29.64 percent) and Commodity Composition Effect (2.43 percent). The lesser volume as well as percentage of Commodity Composition and negative Competitiveness effect indicates that India is lacking in terms of competitive structure of its products. The competitiveness factor is very crucial in determining the future of export sector of any nation. So, it pretend us

ominous sign about the exports that show repeatedly negative competitiveness effect during the study period, which can hamper the export growth in future if not checked.

Although Indian export sector is showing promising growth in every phase of study but credit goes to World Demand Effect and Market distribution Effect, which indicates that Indian exports are sailing with the wind of world growing exports and in routine markets only. But sign of caution is also hovering over it after global crisis too. After global financial crisis world demand effect has declined significantly and Indian export catapulted only on market distribution effect. The silver lining that emerged after global financial crisis was that the commodity composition effect emerges positive, i.e., selection of demanded commodities for export got momentum after crisis period. However, on the competitive effect, Indian export sector is not up to the mark.

In nutshell, it can be concluded that Indian exports are growing sheer on the basis of fixed market and apparent increase in global export, which can be considered as an exogenous parameter, i.e., if global export falls Indian export will eventually follow the suit. Simultaneously, it was found that Indian export product lines are not competitive in global trade, which pose a very alarming picture for Indian export in coming years or so. This analysis has its policy implications too, that if India wants to sustain its export growth in future then brand India will have to emerge as a hub of globally competitive products. Policy makers must expedite the process the make, 'Make in India' a reality and in very shorter span of time.

To scratch the surface further, same analysis was done at commodity level to identify which product line are competitive or not, so that a microscopic view can provide a better understanding at commodity line of SITC coding. An important point must be kept in mind while applying CMS at Commodity lines, owing to methodology, CCE remain zero always. Hence, CMS will provide World Demand Effect, Market Distribution Effect and Competitiveness Effect on Indian exports at commodity levels, and is illustrated in section 5.4.

5.4 Decomposition of Indian Exports (Commodity wise)

SITC 3 digit classified commodities are put under broad category of SITC 1 digit level, which include all the 257 commodity groups in the classification from 2001 to 2013 and are elucidated in table 5.4.

Table 5.4

Commodity wise growth performance: 2001-13

($bn)

Product Code	ΔX	WDE	MDE	CE
SITC 0	28.35 (100)	1135.24 (40.04)	2898.27 (99.77)	-3935.67 (-138.81)
SITC 1	1.13 (100)	30.41 (26.91)	48.35 (42.79)	-77.63 (-68. 56)
SITC 2	14.4 (100)	490.92 (34.09)	444.43 (30.87)	-920.95 (-63.93)
SITC 3	67.42 (100)	974.24 (14.45)	2272.74 (33.71)	-3179.56 (-47.16)
SITC 4	0.92 (100)	85.91 (93.72)	53.03 (57.86)	-138.03 (-150.58)
SITC 5	34.68 (100)	1121.67 (32.34)	3180.8 (91.71)	-4267.79 (-123.04)
SITC 6	67.13 (100)	2720.94 (40.53)	1972.6 (29.38)	-4626.41 (-68.91)
SITC 7	42.33 (100)	539.36 (12.74)	6309.95 (149.06)	-6806.98 (-160.81)
SITC 8	30.16 (100)	1483.97 (49.21)	1527.36 (50.65)	-2981.17 (-98.85)
SITC 9	2.47 (100)	0.19 (.08)	1.69 (.69)	0.59 (.24)

Source: Calculation based on UNCTAD data
Note: ΔX= Actual change in Indian exports; WDE= World Demand Effect; MDE= Market Distribution Effect and CE= Competitiveness Effect.

Table clearly shows that the growth of Indian exported commodities is purely attributed to the market distribution effect which shares a greater percentage than other effects except few commodities like Crude materials, inedible, except fuels (SITC 2), Animal and vegetable Oils, fats and waxes (SITC 4) and Manufactured goods classified chiefly by material (SITC 6) that have higher share of World Demand Effect. Besides this, the competitiveness effect has been negative for all the commodities except Commodities and transactions not classified elsewhere in SITC (SITC 9).

Food and Live Animals (SITC 0), Beverages and tobacco (SITC 1), Mineral fuels, lubricants and related materials (SITC 3), Chemicals and related products, n.e.s. (SITC 5), Machinery and Transport equipment (SITC 7) and Miscellaneous Manufactured Articles (SITC 8) and Commodities and transactions not classified elsewhere in SITC (SITC 9) have shown the growth mostly due to the high market

distribution effect sharing the percentages of 99.77, 57.86, 91.77, 149.06, 50.65 and 0.69 respectively as shown in table 5.4.

However, some commodities like SITC 2, SITC 4, and SITC 6 are showing an increasing percentage of World demand effect of 34.09 percent, 93.72 percent and 40.53 percent respectively comparably than that of their Market Distribution effect of 30.87 percent, 57.86 percent and 29.38 percent respectively as shown in table 3.3. The negative Competitiveness effect shows that the selected commodities fail to maintain their competitive edge in terms of their price and non-price components in the world market. The growth of the commodities is only because of the growing world demand and the growing absorption of the particular markets where Indian exports have been supplied during the time frame of 2001 to 2013.

The concluding remarks can be established as commodity lines are showing an increasing growth in the study period except few product lines like SITC 1, SITC 4 and SITC 9 that still doesn't shown any incremental change in the actual growth. However, the growth of all these commodity groups is purely attributed to the growing world demand effect and market distribution effect. The overall export growth during 2001 to 2013 of these product groups is growing completely on the basis of permanent market and evident increment in the world exports, which could affect the Indian export sector in future as India will eventually follow the wind of the global exports. In meanwhile, it is found that the commodity groups that India is exporting lack competitiveness in the world trade market, which is necessarily an alarming situation for Indian exports in approaching years.

This analysis has its own policy implication too, that if India needs to become globally competitive, it needs to focus on the products that have high potential of being sold in the market and should increase the supply of those products which are demanded more by the selected markets. Appropriate internal economic policies and increasing supply of the products along with the quality are very beneficial for the increasing competitiveness of the exported product lines.

Similar analysis is done on the regions with which more than 80 percent of trade India has. An illustrative view is given in section 5.5 that provides an elaborative discussion regarding region wise section of various countries. An important point to consider regarding region wise analysis is that market distribution

effect remains zero for the whole analysis as '*ri'* is equal to '*rij'* owing to the methodology. So, only other three effects regarding export growth would be elaborated in section 5.5.

5.5 Region-wise Decomposition of Indian Exports

Regional orientation does play a very crucial role in any country's export profile and thus Indian export sector is not an exception. In order to capture the Indian export performance during 2001 to 2013 to different regions, table 5.5 elaborates the effects that attribute to the export growth of Indian products during the study period to the selected markets.

Table 5.5

Market Wise Distribution: 2001-13

($bn)

Economy	Region	ΔX	WDE	CCE	CE
United States	Developed America	33.55 *(100)*	829.42 *(2771.992)*	-110.89 *(-330.49)*	-684.98 *(-2041.49)*
Canada	Developed America	1.73 *(100)*	63.10 *(3647.242)*	19.52 *(1128.24)*	-80.89 *(-4675.48)*
Japan	Developed Asia	5.77 *(100)*	217.98 *(3774.963)*	-97.00 *(-1679.83)*	-115.20 *(-1995.13)*
Israel	Developed Asia	3.62 *(100)*	46.89 *(*1294.44*)*	5.07 *(139.84)*	-48.34 *(-1334.28)*
Australia	Developed Economies Oceania	2.00 *(100)*	105.83 *(5293.29)*	-3.55 *(-177.38)*	-100.29 *(-5015.91)*
United Kingdom	Developed Europe	8.36 *(100)*	216.20 *(2585.22)*	13.43 *(160.55)*	-221.26 *(-2645.76)*
Netherland	Developed Europe	8.31 *(100)*	164.75 *(1981.94)*	-29.87 *(-359.36)*	-126.57 *(-1522.58)*
Germany	Developed Europe	6.30 *(100)*	254.65 *(4044.24)*	-18.28 *(-290.30)*	-230.07 *(-3653.93)*
Belgium	Developed Europe	5.45 *(100)*	215.74 *(3955.48)*	6.69 *(122.73)*	-216.98 *(-3978.21)*
Italy	Developed Europe	4.35 *(100)*	150.31 *(3455.69)*	-8.13 *(-186.84)*	-137.83 *(-3168.85)*
France	Developed Europe	4.61 *(100)*	118.51 *(2571.66)*	4.65 *(100.94)*	-118.55 *(-2572.6*)
Spain	Developed Europe	2.42 *(100)*	79.76 *(3289.07)*	3.29 *(135.55)*	-80.62 *(-3324.63)*
China	Eastern Asia	15.49 *(100)*	607.28 *(3919.36)*	1015.89 *(6556.53)*	-1607.67 *(-10375.9)*

China, Hong Kong SAR	Eastern Asia	11.25 *(100)*	746.02 *(6631.40)*	144.13 *(1281.15)*	-878.89 *(-7812.54)*
Rep. Korea	Eastern Asia	4.04 *(100)*	131.79 *(3263.59)*	-12.32 *(-305.12)*	-115.43 *(-2858.47)*
China, Taiwan Province of	Eastern Asia	2.24 *(100)*	81.37 *(3629.71)*	-4.21 *(-187.62)*	-74.92 *(-3342.09)*
Egypt	Northern Africa	2.39 *(100)*	138.52 *(5787.95)*	-20.88 *(-872.62)*	-115.24 *(-4815.33)*
Brazil	South America	5.88 *(100)*	73.05 *(1242.08)*	-0.76 *(-12.98)*	-66.41 *(-1129.1)*
Singapore	South Eastern Asia	13.26 *(100)*	189.77 *(1430.85)*	-39.41 *(-297.13)*	-137.10 *(-1033.72)*
Vietnam	South Eastern Asia	5.77 *(100)*	201.53 *(3492.86)*	177.70 *(3079.93)*	-373.46 *(-6472.79)*
Indonesia	South Eastern Asia	5.56 *(100)*	0.00 *(0.00)*	0.00 *(0.00)*	5.56 *(100)*
Malaysia	South Eastern Asia	4.71 *(100)*	164.77 *(3499.26)*	8.24 *(175.02)*	-168.30 *(-3574.28)*
Thailand	South Eastern Asia	3.61 *(100)*	178.91 *(4962.03)*	-24.74 *(-686.07)*	-150.57 *(-4175.96)*
South Africa	Southern Africa	5.42 *(100)*	103.86 *(1917.70)*	21.95 *(405.22)*	-120.39 *(-2222.92)*
Bangladesh	Southern Asia	4.93 *(100)*	402.10 *(8154.63)*	312.71 *(6341.80)*	-709.87 *(-14396.4)*
Iran	Southern Asia	5.18 *(100)*	86.56 *(1670.85)*	130.16 *(2512.49)*	-211.54 *(-4083.34)*
Sri Lanka	Southern Asia	4.13 *(100)*	147.59 *(3571.40)*	448.31 *(10848.41)*	-591.76 *(-14319.8)*
Nepal	Southern Asia	2.99 *(100)*	89.46 *(2996.10)*	-3.66 *(-122.52)*	-82.81 *(-2773.58)*
Pakistan	Southern Asia	2.01 *(100)*	63.91 *(3176.85)*	14.83 *(737.24)*	-76.73 *(-3814.09)*
Russian Fed.	Transition Economy	1.58 *(100)*	439.94 *(27855.14)*	150.66 *(9539.26)*	-589.02 *(-37294.4)*
UAE	Western Asia	31.41 *(100)*	1195.26 *(3805.25)*	172.69 *(549.77)*	-1336.54 *(-4255.02)*
Saudi Arabia	Western Asia	11.56 *(100)*	261.31 *(2260.34)*	-43.62 *(-377.29)*	-206.14 *(-1783.05)*
Turkey	Western Asia	4.34 *(100)*	105.04 *(2418.28)*	2.49 *(57.40)*	-103.19 *(-2375.69)*
Oman	Western Asia	3.08 *(100)*	66.22 *(2147.09)*	107.38 *(3481.67)*	-170.52 *(-5528.76)*

Source: Calculated from UNCTAD data.

Note: ΔX= Actual change in Indian exports; WDE= World Demand Effect; CCE= Commodity Composition Effect and CE= Competitiveness Effect.

Market wise analysis is done in the same way as discussed in previous sections. Table clearly illustrates that the actual increase of Indian exports to such

markets was mainly attributed to World Demand Effect except few countries like China, Iran, Sri Lanka and Oman to which most attributable for export growth is the Commodity Composition Effect. Table also shows that there has been a wrong selection of commodities for most of the nations including United States as Commodity Composition Effect is negative in these countries, indicating that India exported those commodities to these markets which were having the lesser demand in such market. Similarly the negative Competitiveness Effect illustrates that these commodities lack competitive edge on prices as well as non-price components as shown in table 5.5.

However, there has been increase in Indian exports more in the regions of Western Asia especially UAE which is attributed to both World Demand effect and Commodity composition Effect except for Saudi Arabia for which Commodity composition Effect remains negative for the study period. Eastern Asian nations show an increasing percentage of world demand effect except China that has huge market distribution effect for the Indian exports. Southern Asian countries show positive world demand effect as well as commodity composition effect except Nepal that has negative commodity composition effect. Similar results can be interpreted for other markets of different regions in the same way as per the above paragraph, and is picturized and elucidated in table 3.4. The signs of these components would be helpful for the policy implication as both absorption powers of the market as well as other related factors are responsible for the export growth of any nation so does with India. So to increase exports, India should focus on those markets where both world demand as well as commodity composition is positive, and should try to export those commodities which are highly demanded by these markets and should avoid the exporting of wrong commodities.

5.6 Conclusion

The growth of Indian exports during 2001-13 has been mainly due to the Market Distribution Effect and World Demand Effect which remains positive for the study period. The actual change of Indian exports during 2001 to 2007 was $102.02 billion which was mainly attributed to the World Demand Effect (53.14 percent) and Market Distribution Effect (63.28 percent). There has been wrong selection of exported commodities during Phase I (2001-07) which is reflected by the negative Commodity Composition Effect (-4.62 percent), also large negative Competitiveness

effect (-110.8 percent) indicate that Indian exports failed to capture the competitive edge in the world market during the same period of pre-recession. However, there has been a quite improvement over actual increase in Indian exports during post recession period of Phase II (2008-13) than that of pre-recession period. Actual increase of exports during this period was $154.75 billion. The growth is mainly attributed to high Market Distribution Effect (106.21 percent) followed by World demand effect (18.62 percent) which remains quite low than that of pre-recession period mainly due to recession. However, Commodity Composition remains positive in this period indicating that commodity selection for exports has been improved, but negative Competitiveness Effect reflects that exports fail in terms of competitiveness in the world market.

Almost similar results came up for Commodity wise growth of Indian products whose actual increments were only due to the Market Distribution Effect and World Demand Effect and Competitiveness effect remains negative except SITC 9, indicating that commodities exported by India didn't grow due to their competitive structure in the world market, but due to other two factors. The same is true for the region wise export growth that also reflects the same results of growth. The Competitiveness effect remains negative for all the regions that indicate the growth of exports towards such markets was not due to competitive edge of Indian products but by other factors that led export growth.

Hence, it can be concluded that exports of India grow completely on the basis of permanent market as well as growing global exports, which affect Indian exports exogenously, i.e., exports of India follow the global exports the same way as they were moving. The growth of the exports sector of India shows a capable growth in every selected phase of the study but tribute goes to only to two main components which are world demand effect and market distribution effect. However, there has been decline in the world demand after the financial crisis which shows the impact of global financial crisis on Indian export performance and reflects the importance of this component for export growth. Competitiveness effect remains negative for almost in every selected analysis, indicating that Indian export sector is not up to the mark. Thus alarming picture could be the outcome for the export performance of India in coming years on the basis of competitive edge of products.

The analysis thus has policy implications as per the study, that if India want to maintain its export growth in future, then India has to emerge as the hub of globally

competitive products, like ‘Make in India’ process should be accelerated as soon as possible by the policy makers, so that brand India could be recognised globally. Similarly looking at region wise growth of Indian exports, ‘Look East’ policy is very appropriate and must be encouraged, because study shows Indian exports grow more in the markets of Asia mainly to Western Asia and Eastern Asia. So, need for India is to focus on those markets which have high absorption power and should focus on those commodities which are demanded more by the market.

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Chapter - 6
CONCLUSION AND POLICY SUGGESTIONS

Since 1991, India has been an active participant of open policies, which helped India to become a destination for foreign investors, a huge market for consumer goods and a possible hub for manufacturing. But most cherished feature of Indian economy, i.e., a flourishing country for making competitive global products, has yet to achieve. Indian products are yet to make mark in global market and their competencies are artificial, barring few commodities. Study tries to unearth growth and composition of India's export, India's export competitiveness and performance of Indian export during pre and post global crisis scenario and hence concluding touch is given below;

An impressive growth rate was seen in Indian export sector after liberalization period and witnessed sharp changes in direction and composition also accordingly with the increasing world exports. Indian exports grew at an impressive annual growth of 16.96 percent from 2001 to 2013. As compared to world growth of exports, India has showed very high annual growth during the same period along with other giant economies of the world. The exports grew from $43.88 billion in 2001 to $336.61 billion in 2013, increasing the share in world total exports from 0.71 percent in 2001 to 1.78 percent in 2013. However, exports to total trade ratio has shown a slight decline from 46.42 percent in 1995 to 41.94 in 2013, and imports to total trade increased from 53.58 percent to 58.06 percent during the same period. The growth of Indian exports for the time period of 1995-2000 was only 4.95 percent, increased to 18.73 percent during the pre-recession phase of 2001-07 and showed a decline in post-recession period of 2008-13 to 10.81 percent. The growth in commodity groups is very smooth during the study period and most of the commodities have shown an impressive increment like, SITC 0 has increased from $5.21 billion in 2001 to $33.57 billion in 2013. During the same period other commodities that show similar movement are; SITC 2 ($1.62 billion to $16.04 billion); SITC 3 ($2.15 billion to $69.57 billion); SITC 5 ($4.57 billion to $39.43 billion); SITC 6 ($15.90 billion to $83.03 billion); SITC 7 ($3.77 billion to $46.10 billion) and SITC 8 has increased from $8.78 billion to $38.94 billion during the same period. Others commodities SITC 1, SITC 4 and SITC 9 do not show much significant change.

The direction of Indian exports has been rapidly shifting from the developed economies towards the developing economies of the globe. The shift has been more to developing economies of South America as well as African continent. Western Asia is the most favoured region as per data; most of the Indian exports are going and growing towards that market. The developed economies of Europe and America are declining in share percentage of Indian exports and opposite is reflected by the study towards the Asian developing market. The direction towards these developing regions also shows a cleverly approach of Indian export sector. Because India can reap the benefits of the export sector in this demand growing market especially UAE. The growing demand in these Asian markets could prove helpful for the Indian export sector as external demand is very necessary for export performance of any nation and Indian is no exception. The higher absorption power in these growing Asian economies like UAE, Saudi Arabia, China and Hong Kong could make Indian exports to gain momentum not only in these markets but also for other regions, because external demand is very necessary to maintain competitive edge in the worlds market. 'Look East Policy' and 'Act East Policy' given by the policy makers of India should be encouraged and accelerated to get the benefit of high purchasing power of these economies and to capture the markets.

Indian export sector has grown very significantly, albeit there has not been any dominance of Indian products in the world market. Most of the major product sectors like Indian Textile, Base Metals and Mineral Products all are showing a declining trend in their competitiveness in world market. Textile and Textile articles (HS 50-63) have shown a decline of 16.92 percent from 2001 to 2013 in those products who were Competitive Positioned and at the same time an increment of 14.95 percent was seen in the products whose RCA indices are less than one. The Textile Sector of India that contributes about 15 percent to total reported product lines at HS 6 digit level is losing the competitive edge, and thus has to look upon the increasing competitive pressure from the lower cost producers of similar product category like Pakistan, China and Bangladesh which otherwise could hamper its production in coming years or so. Similar other product lines that constitute most for the Indian export market are also losing their Competitive structure like, Base Metal and Articles (HS 72-83), Mineral Products (25-27), Measuring and Musical Instruments (HS 90-92), all such product lines are on a decline of their Competitive Positioned products from 2001 to 2013.

However, there has been a positive change for some sectors like Chemicals and Transportation Equipments which means that Indian export sector is gaining advantage in the more value added products which is a good sign for future to be in the competition in the world market. But, within the overall export profile of India, there is no uniform trend in the Competitive Positioned Product line and more obvious is that there has been a significant decline in such products for most of the dominant sectors. Simultaneously emerging products are showing momentum in product categories of chemicals, machinery and mechanical appliances, thus focus should be given to such product lines as future could be apparent in these exported products in the world market. To remain in the competitiveness, India should look upon those products that are gaining comparative advantage during the study period and also products with higher percentage of emerging product lines should be keenly held, as a competitive threat is always there from low wage neighbouring economies like China that otherwise could hamper export competitive structure of India. Thus to achieve competitiveness in this rapidly globalizing world, India would require much efforts at both micro as well as macro levels.

The growth of Indian exports during 2001-13 has been mainly due to the Market Distribution Effect and World Demand Effect which remains positive for the study period. The actual change of Indian exports during 2001 to 2007 was $102.02 billion which was mainly attributed to the World Demand Effect (53.14 percent) and Market Distribution Effect (63.28 percent). There has been wrong selection of exported commodities during Phase I period (2001-07) which is reflected by the negative Commodity Composition Effect (-4.62 percent), also large negative Competitiveness effect (-110.8 percent) indicate that Indian exports failed to capture the competitive edge in the world market during the same period of pre-recession. However, there has been a quite improvement over actual increase in Indian exports during post recession period of Phase II (2008-13) than that of pre-recession period. Actual increase of exports during this period was $154.75 billion. The growth is mainly attributed to high Market Distribution Effect (106.21 percent) followed by World demand effect (18.62 percent) which remains quite low than that of pre-recession period mainly due to recession. However, Commodity Composition remains positive in this period indicating that commodity selection for exports has been

improved, but negative Competitiveness Effect reflects that exports fail in terms of competitiveness in the world market.

Similar results are seen in Commodity wise growth of Indian products whose actual increments were only due to the Market Distribution Effect and World Demand Effect and Competitiveness effect remains negative except SITC 9, indicating that commodities exported by India didn't grow due to their competitive structure in the world market, but due to other two factors. SITC 1 showed an actual increment of $28.35 billion during 2001 to 2013, attributed to WDE (40.04 percent) and MDE of 99.77 percent with high Competitiveness Effect of minus 138.81 percent. SITC 2 increased by $14.4 billion mainly attributed to WDE (34.09 percent) followed by MDE (30.87 percent) and Competitiveness Effect remains negative at minus 63.93 percent. SITC 3 increased by 67.42 USD billion mainly attributed to MDE (33.71 percent) followed by 14.45 percent of WDE, Competitiveness Effect remains negative at minus 47.16 percent. SITC 5, SITC 6, SITC7 & SITC 8 all improved by good amount of USD billion due to these two factors of growth, i.e., WDE and MDE. SITC 1, SITC 4 and SITC 9 increased only by smaller values of $1.13 billion, $0.92 billion and $2.47 billion respectively during the same period of 2001 to 2013.

Region wise export growth of Indian products is mainly attributed to WDE which remains positive for all the regions and besides this there has been appropriate selection of commodities to such markets as most of the markets show positive Commodity Composition Effect except some of the countries. The countries that show both WDE and CCE positive are Oman, Turkey, UAE, Russian Fed., Pakistan, Sri Lanka, Iran, Bangladesh, South Africa, Malaysia, Vietnam, Hong Kong, China, Spain, France, United Kingdom, Belgium, Israel and Canada. However, Competitiveness Effect remains negative for all the selected countries which show that Indian exports to these markets grow not because of competitiveness in these products but by other two factors.

The analysis can be summarised as, exports of India grow completely on the basis of permanent market as well as growing global exports, which affect Indian exports exogenously, i.e., exports of India follow the global exports the same way as they were moving. The growth of the exports sector of India shows a capable growth in every selected phase of the study but tribute goes to only to two main components which are world demand effect and market distribution effect. However, there has been decline in the world demand after the financial crisis which shows the impact of

global financial crisis on Indian export performance and reflects the importance of this component for export growth. Competitiveness effect remains negative for almost in every selected analysis, indicating that Indian export sector is not up to the mark. Thus alarming picture is the outcome for the export performance of India in coming years on the basis of competitive edge of products.

Hence, whole study can be concluded as, Indian exports show much improvement since 2001 in both value terms as well as in growth rate. However, growth of these exported products was only because of the growing world demand and the high absorption power or purchasing power of the selected markets where India is exporting her products. The product lines, that dominates the Indian export sector like Textiles, Base Metals and Minerals are losing their comparative advantage and hence faces a tremendous pressure from other competitors of the world market. Some of the new high value products are coming up with the pace like Chemicals, Machinery and Mechanical Appliances in both Competitive as well as emerging product category, which shows an improvement of export sector and can be future of Indian export industry if so maintained, because both internal as well as external factors an equally important role in maintaining the competitiveness of products. Overall export performance of Indian products did well in world besides lacking competitiveness of the exported product; the credit goes to the market distribution and growing world demand in both pre-recession as well as post-recession period under study. The growing markets where Indian exports are gaining momentum are Asian developing market especially Western Asia that majorly include UAE and Saudi Arabia which are major consumers of Indian products. China and Hong Kong also show higher market distribution for Indian exports, indicating that India should focus more on these markets to gain the competitive edge in her products in scale and scope.

Following are the policy suggestions arrived at, by studying India's export competitiveness:

- Historically, textiles and textile article put India in global map due to its sheer competitiveness, owing to cheap labour and natural resources, but in recent past textile and textile articles are not performing up to the mark and product line fall down by 16.92% in which India enjoyed RCA greater than one. By taking it as a warning call Government should frame textile policies in such a manner to augment the textile sector, within the framework of WTO.

- Textile sector also need investment in modern technology and product as well are market diversification so that this sector revive.
- Bilateral trade agreements and regional trade agreements of India with other nations and regions respectively should be encouraged and accelerated so that more integrated supply chains could be created to promote the export sector.
- Domestic capacity and quality of products needs to be improvised through regulatory and effective framework so that products exported by India could meet the international standard and thus could get the momentum in their expansion. Standard awareness of products is necessary to take lead in the emerging sector of Indian exports, because due to changing portfolio of world market with respect to international standard and quality.
- Export Promotion Boards needs to adopt an out of box thinking but exploring new product markets and provide in-house competencies and modification required to sell the product globally.
- India should work on domestic supply chain to reduce the cost of carrying products, which will reduce the cost of production and will give some cost advantage to sell the product cheaply in global markets.
- India should pursue Make in India campaign aggressively to become manufacturing hub.
- Open trade and investment policies of India needs to be encouraged and modified as restrictive policies make domestic firms to access the competence of goods and services internationally. Trade agreements and FDI are very important players in accelerating the production process and facilitate the allocation of resources to increase productive employment.
- Research and development (R&D) spending needs to be increased to have access to new innovations and new technology, so that cost of production could be lowered and quality could be improved. India invests only 0.9 percent of GDP on R&D as compared to her neighbouring Asian economies like China, Japan, South Korea and Singapore that spend close to 2 percent of their GDP on R&D, thus India needs to improvise on R&D expenditure to gain competitiveness in the world market.

- Training programmes like high quality business education, entrepreneurship development training and labour skill development programmes should be encouraged so that competitiveness could be achieved in the long run.
- Developing of export promotion zones like SEZ's and similar free zones could make India to enjoy international market competitiveness and thus should be encouraged.
- As India is lacking in competitiveness but still is able to export large base of products in the world market especially in the developing market of Asia, that indicate India should focus its exports towards these markets to gain momentum in the competitive edge of her products. UAE, China, Hong Kong and other similar regions in Asia are becoming most favoured nations for Indian exports as per study, so these economies could make Indian products to be recognised globally. Make in India, Look East Policy and Act East Policy definitely needs to be encouraged then, so that India can benefit in both scale and scope in near future.
- India has some competitive advantage in vegetables and other agro-products, thus India need to pursue a policy to make Indian agriculture globally competitive by modifying Agri-export zones, so that production cost could come down through economies of scale. Product quality and packaging should be made better through investments related to trade and development of agricultural produce.

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Appendices

Appendix 1

UNCTAD Classification of Economies Region-wise

Region	Economies
Transition economies	Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kazakhstan, Kyrgyzstan, Montenegro, Republic of Moldova, Russian Federation, Serbia, Serbia and Montenegro, TFYR of Macedonia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan.
Developed Economies Europe	Andorra, Austria, Belgium, Bulgaria, Croatia, Cyprus, Denmark ,Czech republic, ,Estonia, Faeroe Islands, Finland, France, Germany, Gibraltar, Greece, Holy See, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, San Marino, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom
Developed economies: Oceania	Australia, New Zealand
Eastern Africa	Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Mozambique, Rwanda, Seychelles, Somalia, South Sudan, Uganda, United Republic of Tanzania, Zambia, Zimbabwe.
Middle Africa	Angola, Cameroon, Central African Republic, Chad, Congo, Dem. Rep. of the Congo, Equatorial Guinea, Gabon, Sao Tome and Principe.
Northern Africa	Algeria, Egypt, Libya, Morocco, Sudan, Sudan (2011), Tunisia, Western Sahara.
Southern Africa	Botswana, Lesotho, Namibia, South Africa, Swaziland.
Western Africa	Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Saint Helena, Senegal, Sierra Leone, Togo.
Caribbean	Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Bonaire, Sint Eustatius and Saba, British Virgin Islands, Cayman Islands, Cuba, Curaçao, Dominica, Dominican Republic, Grenada, Haiti, Jamaica, Montserrat, Netherlands Antilles, Saint Kitts and Nevis, Saint Lucia Saint Vincent and the Grenadines, Sint Maarten (Dutch part), Trinidad and Tobago, Turks and Caicos Islands.

Central America	Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama.
South America	Argentina, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Ecuador, Falkland Islands (Malvinas), Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela (Bolivarian Republic of).
`Eastern Asia	China, China, Hong Kong SAR, China, Macao SAR, China, Taiwan Province of, Korea, Dem. People's Rep. Of, Korea, Republic of, Mongolia.
Southern Asia	Afghanistan, Bangladesh, Bhutan, India, Iran (Islamic Republic of), Maldives, Pakistan, Nepal, Sri Lanka,.
South-Eastern Asia	Brunei Darussalam, Cambodia, Indonesia, Indonesia (2002), Lao People's Dem. Rep., Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, Viet Nam.
Western Asia	Bahrain, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, State of Palestine, Syrian Arab Republic, Turkey, United Arab Emirates, Yemen.
Developing economies: Oceania	American Samoa, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, New Caledonia, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis and Futuna Islands.
Developed economies: America	Bermuda, Canada, Greenland, Saint Pierre and Miquelon, United States.
Developed Economies Asia	Japan, Israel
Other Territories	Other Territories

Source: UNCTAD, United Nations Conference on Trade and Development.

Appendix 2

Product Classification SITC Rev 3

- **0- Food and live animals**
  - 00 - Live animals other than animals of division 03
  - 01 - Meat and meat preparations
  - 02 - Dairy products and birds' eggs
  - 03 - Fish (not marine mammals), crustaceans, molluscs and aquatic invertebrates, and preparations thereof
  - 04 - Cereals and cereal preparations
  - 05 - Vegetables and fruit
  - 06 - Sugars, sugar preparations and honey
  - 07 - Coffee, tea, cocoa, spices, and manufactures thereof
  - 08 - Feeding stuff for animals (not including unmilled cereals)
  - 09 - Miscellaneous edible products and preparations
- **1 - Beverages and tobacco**
  - 11 – Beverages
  - 12 - Tobacco and tobacco manufactures
- **2 - Crude materials, inedible, except fuels**
  - 21 - Hides, skins and furskins, raw
  - 22 - Oil-seeds and oleaginous fruits
  - 23 - Crude rubber (including synthetic and reclaimed)
  - 24 - Cork and wood
  - 25 - Pulp and waste paper
  - 26 - Textile fibres (other than wool tops and other combed wool) and their wastes (not manufactured into yarn or fabric)
  - 27 - Crude fertilizers, other than those of division 56, and crude minerals (excluding coal, petroleum and precious stones)
  - 28 - Metalliferous ores and metal scrap
  - 29 - Crude animal and vegetable materials, n.e.s.
- **3 - Mineral fuels, lubricants and related materials**
  - 32 - Coal, coke and briquettes
  - 33 - Petroleum, petroleum products and related materials
  - 34 - Gas, natural and manufactured
  - 35 - Electric current
- **4 - Animal and vegetable oils, fats and waxes**
  - 41 - Animal oils and fats
  - 42 - Fixed vegetable fats and oils, crude, refined or fractionated

	• 43 - Animal or vegetable fats and oils, processed; waxes of animal or vegetable origin; inedible mixtures or preparations of animal or vegetable fats or oils, n.e.s.
• **5 - Chemicals and related products, n.e.s.**	• 51 - Organic chemicals • 52 - Inorganic chemicals • 53 - Dyeing, tanning and colouring materials • 54 - Medicinal and pharmaceutical products • 55 - Essential oils and resinoids and perfume materials; toilet, polishing and cleansing preparations • 56 - Fertilizers (other than those of group 272) • 57 - Plastics in primary forms • 58 - Plastics in non-primary forms • 59 - Chemical materials and products, n.e.s.
• **6 - Manufactured goods classified chiefly by material**	• 61 - Leather, leather manufactures, n.e.s., and dressed furskins • 62 - Rubber manufactures, n.e.s. • 63 - Cork and wood manufactures (excluding furniture) • 64 - Paper, paperboard and articles of paper pulp, of paper or of paperboard • 65 - Textile yarn, fabrics, made-up articles, n.e.s., and related products • 66 - Non-metallic mineral manufactures, n.e.s. • 67 - Iron and steel • 68 - Non-ferrous metals • 69 - Manufactures of metals, n.e.s.
• **7 - Machinery and transport equipment**	• 71 - Power-generating machinery and equipment • 72 - Machinery specialized for particular industries • 73 - Metalworking machinery • 74 - General industrial machinery and equipment, n.e.s., and machine parts, n.e.s. • 75 - Office machines and automatic data-processing machines • 76 - Telecommunications and sound-recording and reproducing apparatus and equipment • 77 - Electrical machinery, apparatus and appliances, n.e.s., and electrical parts thereof (including non-electrical counterparts, n.e.s., of electrical household-type equipment)

	• 78 - Road vehicles (including air-cushion vehicles) • 79 - Other transport equipment
• **8 - Miscellaneous manufactured articles**	• 81 - Prefabricated buildings; sanitary, plumbing, heating and lighting fixtures and fittings, n.e.s. • 82 - Furniture, and parts thereof; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings • 83 - Travel goods, handbags and similar containers • 84 - Articles of apparel and clothing accessories • 85 - Footwear • 87 - Professional, scientific and controlling instruments and apparatus, n.e.s. • 88 - Photographic apparatus, equipment and supplies and optical goods, n.e.s.; watches and clocks • 89 - Miscellaneous manufactured articles, n.e.s.
• **9 - Commodities and transactions not classified elsewhere in the SITC**	• 91 - Postal packages not classified according to kind • 93 - Special transactions and commodities not classified according to kind • 96 - Coin (other than gold coin), not being legal tender • 97 - Gold, non-monetary (excluding gold ores and concentrates)

Source: UNCTAD, United Nations Conference on Trade and Development

Appendix 3

COMMODITIES DESCRIPTION 2-DIGIT HARMONIZED SYSTEM CODE

Code	Product label	Code	Product label
01	Live animals	**51**	Wool, animal hair, horsehair yarn and fabric thereof
02	Meat and edible meat offal	**52**	Cotton
03	Fish, crustaceans, molluscs, aquatic invertebrates nes	**53**	Vegetable textile fibres nes, paper yarn, woven fabric
04	Dairy products, eggs, honey, edible animal product nes	**54**	Manmade filaments
05	Products of animal origin, nes	**55**	Manmade staple fibres
06	Live trees, plants, bulbs, roots, cut flowers etc	**56**	Wadding, felt, nonwovens, yarns, twine, cordage, etc.
07	Edible vegetables and certain roots and tubers	**57**	Carpets and other textile floor coverings
08	Edible fruit, nuts, peel of citrus fruit, melons	**58**	Special woven or tufted fabric, lace, tapestry etc.
09	Coffee, tea, mate and spices	**59**	Impregnated, coated or laminated textile fabric
10	Cereals	**60**	Knitted or crocheted fabric
11	Milling products, malt, starches, inulin, wheat gluten	**61**	Articles of apparel, accessories, knit or crochet
12	Oil seed, oleagic fruits, grain, seed, fruit, etc., nest	**62**	Articles of apparel, accessories, not knit or crochet
13	Lac, gums, resins, vegetable saps and extracts nes	**63**	Other made textile articles, sets, worn clothing etc.
14	Vegetable plaiting materials, vegetable products nes	**64**	Footwear, gaiters and the like, parts thereof
15	Animal, vegetable fats and oils, cleavage products, etc.	**65**	Headgear and parts thereof
16	Meat, fish and seafood food preparations nes	**66**	Umbrellas, walking-sticks, seat-sticks, whips, etc.
17	Sugars and sugar confectionery	**67**	Bird skin, feathers, artificial flowers, human hair
18	Cocoa and cocoa preparations	**68**	Stone, plaster, cement, asbestos, mica, etc. Articles
19	Cereal, flour, starch, milk preparations and products	**69**	Ceramic products
20	Vegetable, fruit, nut, etc. food preparations	**70**	Glass and glassware
21	Miscellaneous edible preparations	**71**	Pearls, precious stones, metals, coins, etc.
22	Beverages, spirits and vinegar	**72**	Iron and steel
23	Residues, wastes of food industry, animal fodder	**73**	Articles of iron or steel
24	Tobacco and manufactured tobacco substitutes	**74**	Copper and articles thereof
25	Salt, sulphur, earth, stone, plaster, lime and cement	**75**	Nickel and articles thereof
26	Ores, slag and ash	**76**	Aluminium and articles thereof
27	Mineral fuels, oils, distillation products, etc.	**77**	Reserved for possible future use
28	Inorganic chemicals, precious metal compound, isotopes	**78**	Lead and articles thereof
29	Organic chemicals	**79**	Zinc and articles thereof
30	Pharmaceutical products	**80**	Tin and articles thereof
31	Fertilizers	**81**	Other base metals, cermet's, articles thereof
32	Tanning, dyeing extracts, tannins, derivs,pigments etc.	**82**	Tools, implements, cutlery, etc. of base metal
33	Essential oils, perfumes, cosmetics, toiletries	**83**	Miscellaneous articles of base metal

34	Soaps, lubricants, waxes, candles, modelling pastes	**84**	Machinery, nuclear reactors, boilers, etc.
35	Albuminoids, modified starches, glues, enzymes	**85**	Electrical, electronic equipment
36	Explosives, pyrotechnics, matches, pyrophorics, etc.	**86**	Railway, tramway locomotives, rolling stock, equipment
37	Photographic or cinematographic goods	**87**	Vehicles other than railway, tramway
38	Miscellaneous chemical products	**88**	Aircraft, spacecraft, and parts thereof
39	Plastics and articles thereof	**89**	Ships, boats and other floating structures
40	Rubber and articles thereof	**90**	Optical, photo, technical, medical, etc. Apparatus
41	Raw hides and skins (other than furskins) and leather	**91**	Clocks and watches and parts thereof
42	Articles of leather, animal gut, harness, travel goods	**92**	Musical instruments, parts and accessories
43	Furskins and artificial fur, manufactures thereof	**93**	Arms and ammunition, parts and accessories thereof
44	Wood and articles of wood, wood charcoal	**94**	Furniture, lighting, signs, prefabricated buildings
45	Cork and articles of cork	**95**	Toys, games, sports requisites
46	Manufactures of plaiting material, basketwork, etc.	**96**	Miscellaneous manufactured articles
47	Pulp of wood, fibrous cellulosic material, waste etc.	**97**	Works of art, collectors pieces and antiques
48	Paper & paperboard, articles of pulp, paper and board	**98**	Project imports; Laboratory chemicals, passenger baggage; personal importation by air or post; ship stores
49	Printed books, newspapers, pictures etc.	**99**	Commodities not elsewhere specified
50	Silk		

Source: UNCOMTRADE, United Nations Commodity Trade

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