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In this issue

New Renewable Energy: Harnessing the Untapped Potential

INTRODUCTION

There has been an increasing realisation on enhancing the use of renewable energy as a primary instrument for achieving the twin objectives of energy sufficiency and climate change mitigation. With India becoming globally more responsible in its endeavour towards sustainable development, the possibility of renewable energy becoming a cornerstone for the country's future energy requirements are significantly high. The key drivers that are likely to further India's cause to promote the use of renewable energy include energy security, climate change, and opportunities in the carbon market.

NEW RENEWABLE ENERGY: A GLOBAL PERSPECTIVE

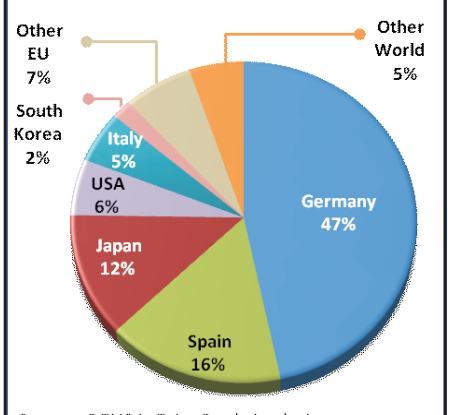
An analysis on the new renewable energy technologies, viz., solar photovoltaic, wind and biomass, indicates a clear shift in global preference towards these technologies as sources of energy, especially in generation of electric power. This is reflected in recent power generation statistics, wherein renewable sources accounted for 47 percent of all types of new generating capacity added to the world's grids (about 300 GW) cumulatively during 2008 and 2009. The increasing importance accorded to renewable energy among international business can also be gauged by the fact that the total investment in renewable energy capacity in 2009 amounted to US$ 150 billion– nearly 40 percent of annual investment in the upstream oil and gas industry, which was a little over US$ 380 billion.

In terms of international trade, global exports of renewable energy supply related products amounted to US$ 284.8 billion, exhibiting an average annual growth of 20.8 percent during the 5-year period 2004-2008. Germany was the largest exporter with exports in 2008 aggregating US$ 40.3 billion followed by China (US$ 37.4 billion), USA (US$ 26.9 billion), Japan (US$ 24.6 billion), France (US$ 11.6 billion) and Italy (US$ 11.5 billion). In terms of imports, USA was the largest importer in 2008 (US$ 35.2 billion) followed by Germany (US$ 27.1 billion), China (US$ 25.8 billion), Spain (US$ 14.4 billion) and South Korea (US$ 9.8 billion).

Photovoltaic Industry

In the recent years, the global photovoltaic (PV) market has been growing at over 40 percent per annum, with global PV installations in 2009 being almost six times the 2004 figure. Thin film's share of the global market increased, from 14 percent in 2008 to 19 percent in 2009 for PV cells, and from 16 percent to 22 percent for PV modules. The global cumulative PV capacity (grid-connected and off-grid installation) reached 25 GW in 2009. The addition in grid-tied PV capacity alone in 2009 is estimated to be 7 GW with off-grid accounting for 3-4 GW. More than half of the new installations in 2009 (grid connected) were in Germany, which continued to be the country with the largest solar PV electricity capacity amounting to 9.8 GW in 2009 (47 percent share), followed by Spain, Japan and USA **(Chart 1)**. Global exports of PV panels/modules amounted to US$ 43.2 billion in 2008, recording an average annual increase of 35.7 percent during the 2004-2008 period. PV panels/modules represented a share of 37.2 percent in global exports of US$ 116 billion of solar energy related goods and components. Germany and China were the two main players in both export and import of PV panels/modules in 2008. India's exports of PV panels increased from US$ 85 mn in 2004 to US$ 529 mn in 2008 (1.2 percent share in global exports), making it the 15th largest exporter. In terms of import, India was ranked 20th with total imports amounting to US$ 420 mn in 2008 as against US$ 45 mn recorded in 2004.

Chart 1 : Solar PV Existing Capacities (Grid-tied), Top 6 countries, 2009 (Total: 21 GW)

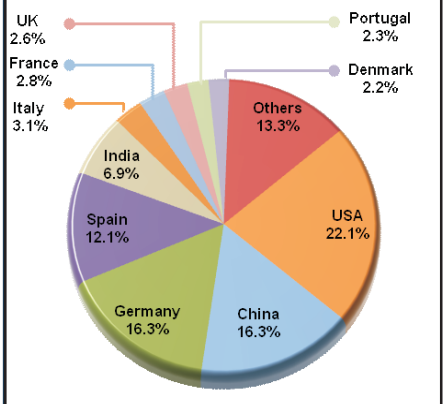


Source: REN21, Exim Bank Analysis

Wind Energy Sector

The global cumulative installed capacity of power generated from wind energy increased from 40 GW at the end of 2003 to 158 GW at the end of 2009, with the annual installed capacity increasing from 8.2 GW in 2004 to 38.3 GW in 2009, thereby recording a CAGR of 36 percent. The additional capacity of 38.3 GW for wind power in 2009 was the highest among all the renewable technologies, an indication of the sector's potential. USA maintained its position as the largest market of wind power globally with a cumulative installed capacity of 35.1 GW in 2009, followed by China (25.8 GW), Germany (25.8 GW), Spain (19.2 GW), and India (10.9 GW) **(Chart 2)**. In terms of international trade, world exports of wind turbines quintupled from US$ 1.1 billion in 2004 to US$ 5.3 billion in 2008. Germany overtook Denmark as the largest exporter of wind turbines in 2008 with exports aggregating US$ 2004 mn compared to Denmark's exports of US$ 1250 mn. India, which had negligible exports of wind turbines in 2004 (US$ 1 mn) increased its exports phenomenally to US$ 651 mn to emerge as the third largest exporter in 2008 (compared to its 12th rank in 2004). In terms of imports, USA was by far the largest market with imports of wind turbines shooting up from mere US$ 64 mn in 2004 (5.6 percent share) to US$ 2679 mn (39.7 percent share) in 2008.

Chart 2 : Wind Power Cumulative Capacity in 2009 (Total: 158.5 GW)



Sources: GWEC, REN21, Exim Bank Analysis

Biomass Sector

The use of biomass as a source of energy for both power generation and heating as also for transportation has been increasing across the globe. Overall, the biomass power capacity (excluding electricity generated from municipal solid waste or industrial waste) amounted to 54 GW by the end of 2009. EU remained the largest region in terms of biomass power capacity with electricity capacity from biomass aggregating 16 GW in 2009. Within EU, the main countries included Germany with biomass power capacity of 4 GW, and Spain with 0.4 GW in 2009. Power generated from biomass has also increased significantly in many developing countries. China's capacity increased 14 percent in 2009 to 3.2 GW while India, which generated 1.9 TWh of electricity with solid biomass in 2008, had a biomass power capacity of 1.5 GW in 2009. By the end of 2009, India had installed 835 MW of solid biomass capacity fuelled by agricultural residues (increase of about 130 MW in 2009) and more than 1.5 GW of bagasse cogeneration plants (up nearly 300 MW in 2009, including off-grid and distributed systems).

NEW RENEWABLE ENERGY SECTOR IN INDIA

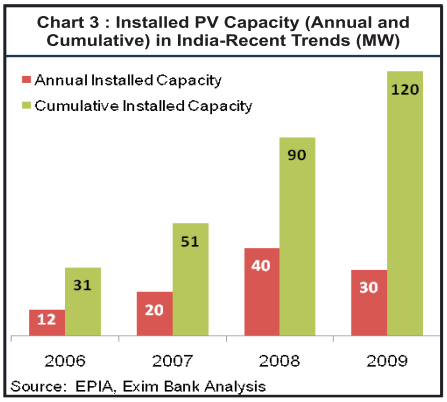
Rapidly growing economic and social development coupled with increasing population has spurred increased energy consumption across all major sectors of the economy. The current power generation mix (as at end July 2010) in India is dominated by coal with a share of 53.2 percent (87.1 GW), followed by large hydropower (22.6 percent share; 37 GW) and gas (10.6 percent; 17.3 GW). Renewable energy sources rank fourth with an installed capacity of 16.4 GW. The encouraging aspect of the growth in India's installed electricity capacity, especially during recent times, has been the increasing application of renewables as energy sources, the share of which has shot up from a mere 1.5 percent as at end March 2003 to 10 percent as at end July 2010. A capacity of about 5.5 GW grid-interactive power generations from various renewable energy sources had been installed up to January 31, 2010 against a target of 12.3 GW for the Eleventh Five Year Plan.

Based on the products identified as being related to renewable goods, India's exports aggregated US$ 3.4 billion as against imports of US$ 4.2 billion in 2008. Exports of renewable goods, on an average, have increased at a faster pace than imports during the period 2004 to 2008. Germany was India's largest trading partner for the identified renewable goods and equipments in 2008 (two-way trade of US$ 1219 mn) followed by China (US$ 1059 mn). USA, Spain, Japan, Italy and Brazil were India's other major trading partners for renewable goods in 2008. From an export perspective, USA was India's largest export destination with exports totalling US$ 597 mn in 2008 (17.6 percent share) – an appreciable average annual growth of 84.3 percent during the 2004-2008 period. As far as imports are concerned, China emerged as the most important source for India's renewables with imports from the country amounting to US$ 1016 mn in 2008, up significantly from US$ 132 mn in 2004. In terms of the product basket, the most actively traded renewable energy goods by India in 2008 was PV panels/modules with amount traded being US$ 949 mn in 2008, more than six fold increase over the 2004 level of US$ 158 mn.

Photovoltaic Industry in India

An estimated 30 MW of new PV capacity was installed in India in 2009 taking the cumulative PV capacity to 120 MW **(Chart 3)**. In terms of the value chain, the total solar cell manufacturing capacity in India is estimated to have touched 175 MW, while the total PV module manufacturing capacity is estimated to have reached 240 MW in 2008-09. The solar PV technology in India is dominated by crystalline silicon with 90 percent of PV modules manufactured in the country using this technology, while only 10 percent of PV modules are manufactured using Thin Film or amorphous silicon technology. PV panels/modules was the largest item exported by India in 2008 under the PV and related goods category with exports

aggregating US$ 529 mn, more than six-fold increase over 2004. While Spain was the largest export destination contributing 40 percent, Germany was the biggest source of imports accounting for 38 percent of the India's total imports of PV panels/modules in 2008.

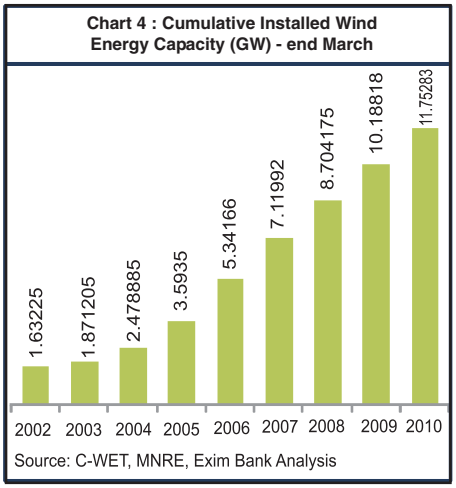


Wind Energy in India

India, with a large peninsula belt and two-season monsoon, has significant potential in generating wind energy. Apart from onshore generation, India also has potential for tapping offshore belts for wind energy. The total wind power installed capacity reached 11.8 GW as at end March 2010, up from 1.6 GW in 2001-02, thereby registering a healthy average annual growth of 28.6 percent **(Chart 4).** The country added 1564.7 MW to the installed capacity in 2009-10 as against 1484.0 MW in 2008-09. The geographic dispersion of wind farms in India has been gradually witnessing a shift. With increasing interests in renewables, the dominance of Tamil Nadu (4875.9 MW) has been gradually declining as other states, including Maharashtra (2071.6 MW), Gujarat (1864.6 MW), Karnataka (1506.9 MW) and Rajasthan (1091.7 MW) have started to catch up. Analysis of India's trade reveals that wind turbines was the single largest product traded by India in the wind energy sector in 2008 with total trade aggregating US$ 653 mn, with almost the entire amount (US$ 651 mn) being for the purpose of exports. USA was the largest export destination for wind turbines (31 percent share) followed by Brazil, Australia, Portugal and Spain.

Biomass Energy in India

Biomass is an important energy source for power generation especially in developing countries like India. For the last 15 years,



biomass power has become an industry attracting annual investment of over ₹10 billion, generating more than 9 GW of electricity per year. A target for addition of 1,700 MW capacity, consisting of 500 MW of biomass power projects and 1,200 MW of bagasse cogeneration projects has been proposed during the 11th Plan period. By June 2010, the cumulative biomass power/bagasse cogeneration based power capacity had reached 2.3 GW, which comprised 0.9 GW of biomass power projects and 1.4 GW of bagasse cogeneration projects. The year 2009-10 witnessed a significant increase in biomass power / bagasse cogeneration capacity addition of 384 MW. With the present utilisation pattern of crop residues, the amount of surplus biomass materials is about 150 mn tonnes, which could generate about 18,000 MWe of power. Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal have potential for setting up biomass based power projects of 100 MW or above.

APPROACH TOWARDS NEW RENEWABLE ENERGY FUNDING

One of the major constraints inhibiting the realisation of the potential of renewable energy is availability of capital. Inability of firm in obtaining finance for renewable energy projects has often been seen as a strong deterrent to investments in many countries around the world, including India. The main hurdle in investment in renewable energy remains the high up-front costs, particularly for installing equipments. To some degree, strengthening capacity building, promoting enabling environment, developing policy frameworks, and improving demands for renewable energy technologies (RET) can help in mitigating the steep transaction costs and create markets. Such capacity building initiatives are a prerequisite to stimulate investments in the renewable energy sector.

In the context of India, a well constructed policy support mechanism by the Governments, both at the Centre and at the State levels, including fiscal incentives, is crucial for the success of renewable energy programmes. Such mechanisms are required to help support shifting the investment paradigm of energy sector away from the typically undervalued investment costs of fossil fuels. Given the barriers, innovative finance mechanisms could lead the way to increase the demand for investments in RET, and generate a sustainable market for the deployment of RET. The success of the usage and the proliferation of RET would only be possible through a two pronged strategic approach (a) sound financial support mechanism; and (b) constructive policy initiatives enabling enhanced investment in the sector, both of which needs to exist in tandem.

SUM UP

It is estimated that the newly-installed capacity from renewable sources in the world as a whole could increase by over 50 percent in a couple of years. This could be achieved through innovative financing and incentive mechanisms. Favourable policies already are in place in more than 100 countries; however, to maintain the upward trend in renewable energy growth, policy efforts need to be taken up to a higher level in these countries, and need to be introduced in the remaining countries, thereby encouraging massive scale up of renewable technologies. India has been at the forefront of renewable energy technology with the country being amongst the first in the world to have a full fledged Ministry catering to this niche sector. However, the success level is relatively low as compared to China, who has moved ahead within a short span of time. India, unlike many countries in Europe, has a distinct advantage in generating energy from the three emerging renewable energy technology sources – photovoltaic, wind, and biomass – which need to be suitably leveraged, so as to realise the untapped potential.

Business Opportunities Updates : Upcoming Projects

Select opportunities for Indian exporters in upcoming projects around the world, funded by multilateral funding agencies such as World Bank, Asian Development Bank, African Development Bank, and European Bank for Reconstruction and Development are given alongside.

Projects funded by these multilateral agencies present attractive business opportunities for consultants, suppliers and contractors. These projects enjoy relatively high priority in the countries where they are taken up for implementation. The procurement guidelines, policies and procedures of the multilateral agencies help ensure equal and fair opportunity for all eligible bidders. Implementation of such projects is monitored by the multilateral agencies.

Interested exporters need to contact the concerned executing agencies to pursue the business opportunities. Our Multilateral Funded Projects Overseas (MFPO) team at Centre One Building, World Trade Centre Complex, Mumbai, would be glad to be of help. Please contact **Mr. Priyanshu Tiwari / Mr. Ashish Kumar** on Tel: 22172319.

Country /Executing Agency	Project/ Brief Scope	Loan from Funding Agency
Azerbaijan Railways Azerbaijan Rail Trade and Transport Facilitation Project 5th floor, Room No. 516 230, Dilara Aliyeva str. Baku 1010, Azerbaijan **Contact:** Mr. Farruh Heybatov Project Manager Tel: (+994-12) 499-6395 Fax: (+994-12) 499-6397 E-mail: office@ady-piu.org	**Rail Trade And Transport Facilitation Project** The project requires the procurement of- ❑ 50-electric locomotives operating on a 25 kV, 50 Hz AC system for use in general freight services on East – West mainline; ❑ Special tools, diagnostic equipment and shop machines; ❑ Drawings, prints and manuals; ❑ The layout design of the respective servicing areas; ❑ Spare assemblies, sub-assemblies, parts, jigs, fixtures, or special tools; and ❑ Training of the railways staff.	**World Bank** US$ 232.88 mn
State Commission for Roads & Bridges (SCRB) Room No. 4 Al-Mutasim street Near the auto dealership Secondary building of SCRB Baghdad -Al-Nahdah, Iraq **Contact:** Mr. Bahzad Ramadan Abdul Kareem Director General-SCRB Mob: 009647901773568 009647901527224 E-mail: bassam_1956@yahoo.com	**Emergency Road Rehabilitation Project (ERRP)** The objective of the Emergency Road Rehabilitation Project is to improve the condition of road assets by rehabilitating highly damaged segments of the country's highway and rural road networks, reestablishing critical river crossings, and restoring the capacity to manage and maintain road assets.	**World Bank** US$ 141.25 mn
Metropolitan Karen Demirchyan CJSC (Yerevan Metro Company) 76 Baghramyan St. 347033, Yerevan, Armenia **Contact:** Mr. Garry Manukyan Adviser to the Chairman Tel/Fax: (+374-10) 273-081 E-mail: metro374@gmail.com	**Yerevan Metro Rehabilitation Project** The project aims to improve and reform public transport services in the capital of Armenia and requires the procurement of the following equipments- ❑ Power supply cable and rectifiers (supply and installation); ❑ Water pumps, motors, valves, connecting pipes, control panels (supply and installation); ❑ Timber sleepers, timber bearers, stock & switch rails, frogs, contact rail protection (supply and installation); ❑ Small plant (tools and equipment) for track maintenance (supply of goods); and ❑ Backhoe loader excavator, tipper/ dumper lorry (supply of goods)	**European Bank for Reconstruction and Development** Euro (€) 5 mn
Municipality of Sibiu Brukenthal Street, No. 2 Sibiu 550178, Romania **Contact:** Ms. Cristina Bica Tel: +40 269 20 88 80 Fax: +40 269 208 811 E-mail: piu@sibiu.ro	**Sibiu Public Transport Commercialisation Project** The project requires the upgrade and refurbishment of two streets mainly located along public transport routes in the City of Sibiu.	**European Bank for Reconstruction and Development** Euro (€) 10.6 mn

Country/ Executing Agency	Project/ Brief Scope	Loan from Funding Agency
Ministry of Works and Human Settlement Department of Roads (DoR) Road Network Project II (RNP II) P.O. Box 143, Thimphu Bhutan **Contact:** Project Coordinator Tel: (+975-2) 326-793 Fax: (+975-2) 335-344 E-mail: tenzinj2006@yahoo.com	**Samdrupcholing - Samrang National Highway Project-II** The project requires the construction and completion of Samdrupcholing - Samrang National Highway (24.2 Km), including two steel truss bridges and ten steel arches under Samdrup Jongkhar dzongkhag. The works under the contract will include earthworks for road formation, drainage, structures, slope protection, gravel wearing course, steel bridges, low-profile steel arches and other ancillary works.	**Asian Development Bank** US$ 38.76 mn
Local Government Engineering Department Level-12, LGED Bhaban, Agargaon Sher-e-Bangla Nagar, Dhaka-1207, Bangladesh **Contact:** Project Director Tel: (+880-2) 818-1208 Fax: (+880-2) 815-6451 E-mail: pd.ugiip2@yahoo.com	**Second Urban Governance And Infrastructure Improvement (Sector) Project** The project requires the procurement of 3-ton capacity garbage dump trucks (36 Nos.)	**Asian Development Bank** US$ 87 mn
East Delta Electricity Production Company Shebeen El Kom Street Araishia Misr Ismailia, Egypt **Contact:** Head of Procurement Sector Tel: (+20-64) 337-1906 Fax: (+20-64) 337-6285 E-mail: procurementsector_EDEPC@hotmail.com	**Suez Thermal Power Plant** The project includes the supply and installation of 1 X 650 MW steam turbine generator and condensers for Suez Thermal Power Plant. The scope of work includes - furnishing all plant, labour, technical and professional services, supervision, construction equipment, technical assistance on site, training, testing and to perform all operations necessary and required to design, fabricate, furnish, deliver, transport to the site, unload, store, erect, test, start-up, commission and maintain until issuance of taking over and acceptance certificate for steam turbine generator and condensers for Suez Thermal Power Plant.	**African Development Bank** US$ 550 mn
Ghana Highway Authority Hall of Technology Ormsby Road Room No. 314 P.O. Box 1641 Accra, Ghana Contact: Chief Executive Tel: (+233-302) 663-922 Fax: (+233-302) 665-571	**Fufulso - Sawla Road Project** The Project has following main components:- ❑ Lot 1: Reconstruction of Fufulso - Sawla Road; Fufulso - Larabanga section (80 km); ❑ Lot 2: Reconstruction of Fufulso - Sawla Road; Larabanga - Sawla section (67.5 km); ❑ Project Location: Fufulso - Sawla Road (Total: 147.5 km), Northern Region, Ghana	**African Development Bank** US$ 165 mn

CONTRACT AWARDS

Select contracts secured by Indian companies/consultants:

Shiv Dial Sud & Sons, Ambala	Contract awarded for supply of laboratory equipments for Malawi's Support to Senior Education Project, funded by the African Development Bank Group.
Consulting Engineering Services (I) Pvt. Ltd., New Delhi	Contract awarded for technical feasibility studies and detailed design for Bangladesh's Coastal Embankment Improvement Programme, funded by the World Bank.
Sai Consulting Engineers (P) Ltd., Ahmedabad	Contract awarded for consultancy services for construction supervision in Ilala municipality for Tanzania's Local Government Support Project, funded by the World Bank.
Mohan Energy Corporation, New Delhi	Contract awarded for supply and installation of PV system for 100 clinics in Gaza and Sofala, for Mozambique Energy Reform and Access Program, funded by the World Bank.
Asbesco (I) Pvt. Ltd., Kolkata	Contract awarded for supply of copper cable, miniature circuit breakers, steel tubes for earthing wires and other electrical equipments for Ethiopia's Electricity Access Rural Expansion Project I, funded by the World Bank.
Macleods Pharmaceuticals Ltd., Mumbai	Contract awarded for the supply of second line pharmaceuticals for the treatment of tuberculosis, for Argentina's Essential project and Public Health Programme, funded by the World Bank.
Good Luck Steel Tubes Ltd., Ghaziabad	Contract for conversion of low voltage distribution system to high voltage distribution system in Kubwa cluster for Nigeria's National Energy Development Project, funded by the World Bank.

Coffee Plantation

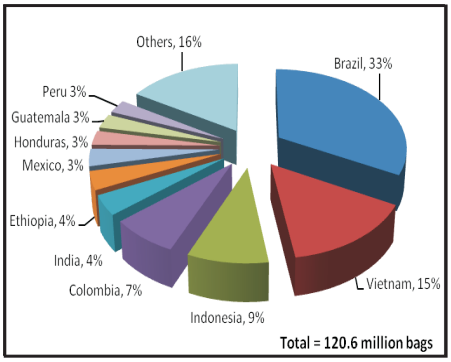
Coffee is the most widespread drink in the world with approximately half-a-trillion cups consumed every year. There are three main varieties of coffee beans, viz, the Arabica, Robusta and Liberia. The Arabica accounts for around 75 percent of the world's total coffee production. Arabica coffee beans are of a comparatively superior quality and require extensive nurturing and careful handpicking. The Robusta variety produces an inferior tasting beverage, as compared with the Arabica variety.

Global Coffee Industry

Production and Consumption

Brazil is the world's largest grower and seller of coffee. Viet Nam, which expanded its production rapidly throughout the 1990s, now holds the number two position, bringing Indonesia into third place and Colombia into fourth **(Chart 1)**.

Chart 1 : Major Global Coffee Producers and their Share – 2009



Source: ICO

Coffee is a seasonal crop. Seasons vary from country to country, starting and ending at different times throughout the year. World consumption in calendar year 2009 is estimated at 132 mn bags compared to 130 mn bags in 2008. Consumption has grown by an average of around 1.2 percent a year since the early 1980s. The most significant growth has been witnessed in Japan, where consumption has grown by around 3.5 percent a year over the same period. Japan is now the third largest importer of coffee in the world.

International Coffee Trade

Coffee is an important commodity in the world economy and is the second largest traded commodity in the world. In accordance with internationally accepted practice, all quantity of coffee traded internationally is denominated in bags of 60 kg net (132.3 lb) green coffee or the equivalent thereof.

Broadly, at the consumer level coffee can be divided into three commercial categories:

- Exemplary quality - limited availability
- Premium quality - moderate availability
- Mainstream quality - very widely available

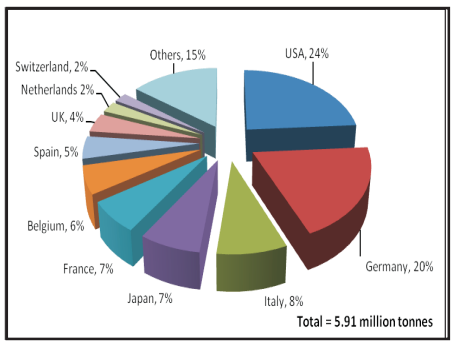
The coffee market is dynamic but it is generally accepted that between 80 and 90 percent of all coffee consumed worldwide is of mainstream quality. Coffee in the global market is mainly traded as green coffee, roasted and ground coffee, soluble coffee, and specialty coffee. Over 75 percent of all coffee consumed in the world is roasted and ground. However, in the recent years there is rising demand of soluble or instant coffee, and specialty coffee. Specialty coffee broadly includes Decafienated Coffee, Organic Coffees or Sustainable Coffees, High Grown Coffees, Estate Coffee (Single Origin Coffees), and Variety Coffee. International coffee trade, in the recent years, has been increasingly influenced by several social and environmental certifications, known as sustainable coffee, particularly seen in the rising specialty coffee sector worldwide. Some of the widely recognised certifications and private labels are: Organic, Fairtrade, Rainforest Alliance, Utz Certified, 4C Common Code, Starbucks' "C.A.F.E". Europe and USA are the largest certified coffee markets in the world.

Global exports of coffee declined by 2.3 percent during 2009. Cumulative world exports of coffee in calendar year 2009 are estimated at 95.5 mn bags compared to 97.7 mn bags in 2008. In terms of value, world coffee exports is estimated at US$ 13.6 billion in 2009 compared to US$ 15.4 billion in 2008. Coffee is produced by around 70 countries. Of these, around 45 countries account for over 97 percent of production and exports. For seven countries, such as Burundi, Ethiopia, Rwanda, Uganda, Honduras, Nicaragua, and Guatemala, the average share of coffee exports in total export earnings exceeded 10 percent during the period 2000 to 2008.

Brazil, owing to its huge production is also the largest exporter of coffee accounting for 33 percent of global exports during 2009, followed by Vietnam (18 percent of global export). India (5 percent), which is the fifth largest producer, also ranks at fifth position in world exporter's list.

Coffee imports worldwide have fallen by 2.8 percent in the year 2009 as compared to the previous year. However, coffee imports have grown at a CAGR of 1.6 percent from 2005 to 2009. USA is the largest importer of coffee. Other major importers are Germany, Italy and France **(Chart 2)**.

Chart 2 : Leading Importers of Coffee (percentage share in 2009)



Source: International Coffee Organisation

Indian Coffee Industry

India produces around 3 lakh MTs of coffee per year and has a yield of around 826 kg per hectare, which is marginally lower as compared to the world average of around 866 kg per hectare. According to Coffee Board of India, the area under coffee plantation in India is over 3.5 lakh hectare in the year 2009-10. In India, coffee plantation is heavily concentrated in the

southern part. Around 90 percent of the coffee production in India takes place in the south Indian states of Karnataka, Kerala and Tamil Nadu. Karnataka covers around 70 percent of total domestic coffee production.

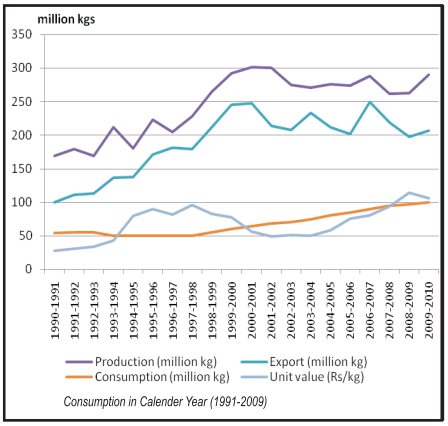
As far as varieties are concerned, Robusta has a share of over 55 percent in the total cultivated land and over 67 percent when it comes to production, indicating that the yield is higher for Robusta as compared to Arabica coffee.

Most coffee holdings are small, constituting around 75 percent of the total area under coffee cultivation and producing 70 percent of the total production. The average holding size of the small holders are around 1.4 hectares. Large holders, have an average size of around 38.4 hectares farm. Among the States, Kerala has the largest area under small holder coffee production. Most of coffee production in the non-traditional coffee producing region is under small holder production.

India's Coffee Trade

India exports over 70 percent of its coffee production but accounts for less than 4 percent of global production, and less than 5 percent of global coffee exports.

Chart 3 : Trends in Production, Exports, Consumption, and Export Price Realisation of Indian Coffee



Source: Exim Bank Research; Coffee Board

Domestic consumption of coffee, after long years of stagnancy have been rising since 1999-2000, largely due to increasing coffee café culture; with rising number of modern coffee shops by both domestic and international players in the country. According to the Indian Coffee Board, in the recent years, domestic coffee consumption is increasing 5 percent to 6 percent annually **(Chart 3)**.

In the recent years, instant/soluble coffee has emerged as a prominent segment in the Indian coffee trade both in domestic and international markets. This segment is almost entirely branded and packaged, and is dominated by multinationals, large Indian coprorates. Although instant coffee production capacity is increasing, actual production is estimated to be around 45,000 tonnes (120,000 tonnes on green coffee basis). Organic coffee production is minuscule at around 300 tons due to lower yields and the prevalence of a low premium over non-organic coffee. India's output of 'certified coffee', such as UTZ and Rainforest Alliance was about 14,000 tonnes in 2009-10. Most of the certified coffee from India is exported to Europe.

European countries, such as Italy, Germany, Belgium, and Spain are the leading markets for Indian coffee. Russia is the second largest importer of Indian coffee. India's coffee exports have fallen continuously during the year 2006-07 to 2009-10, from 213.7 mn kgs to 157.4 mn kgs, respectively. Raw coffee beans are the largest exported item in coffee from India followed by instant coffee. Russia is largest importer of instant coffee from India.

Challenges and Prospects

In the recent years, challenges faced by the global coffee sector are a resultant of globalisation, resulting in emergence of new technologically advanced and cost efficient producers, modern value chains - a spectrum extending from supply of inputs at one end to processing and retailing at the other, and complex web of relationships due to global integration.

As a commodity, coffee has been integrated into the global process exposing it to various liberalisation and deregulatory measures, and gradual lessening of Governments' involvement in the sector. Globally coffee is a smallholder plantation mostly grown in remote, environmentally fragile regions of the world. The challenge therefore is, in achieving an orderly market balance where coffee prices would guarantee a reasonable return not just to the efficient producer but also to the average producer.

Another new crisis that is hovering over the coffee sector currently is the forces of climate change that are reducing crop yields, eradicating available land use for coffee production, and extending the breeding grounds of harmful coffee plant pests.

As the Indian coffee sector is largely being small grower based, the challenges pertaining to small coffee growers globally are also equally relevant for Indian small coffee growers. In addition, Indian coffee growers are faced with challenges largely related to low productivity, high cost of production, shortage of labourers, inadequate technology, inadequate marketing skills, price fluctuation, high dependency on natural weather conditions, high cost of inputs and high indebtedness of planters.

Where on the one hand the challenges faced by the sector are resonating, on the other hand the evolution of the coffee economy in the consuming countries, which mostly comprise of developed nations, has been showing a positive growth pattern with a sustained improvement in profits for the overall coffee industry, facilitated by the emergence of a coffee culture that has manifested itself in new and innovative retail formats, resulting in coffee brands such as Starbucks, and Nescafe becoming global brands. India has also been considerably influenced by this global development.

According to ICO, as global coffee consumption is likely to grow at a steady pace over the period 2009-11, in the long term, over the next decade, total world coffee trade is projected to expand by approximately a million bags per year.

India holds a dominant position in the non-roasted coffee segment with reasonable market share in the Middle East and Europe. Further, with India's increasing presence in the instant coffee, and specialty coffee segment worldwide, Indian coffee sector still remains viable as far as global trade in coffee is concerned.

Exim Bank's Lines of Credit

Exim Bank of India (Exim Bank) has placed special emphasis on extension of Lines of Credit (LOCs) as an effective market entry mechanism with particular focus on small and medium enterprises. Exim Bank extends LOCs to overseas financial institutions, regional development banks, sovereign governments and other entities overseas, to enable buyers in those countries to import developmental and infrastructural projects, equipments, goods and services from India, on deferred credit terms. Indian exporters can obtain payment of eligible value from Exim Bank, without recourse to them, against negotiation of shipping documents. Exim Bank also extends LOCs at the behest of Government of India. Under the LOC extended at the behest of Government of India, Exim Bank reimburses 100 percent of contract value to the Indian exporters, upfront upon the shipment of goods and at least 75 percent of goods and services of total contract value should be sourced from India. Exim Bank's LOCs afford a risk-free, non-recourse export financing option to Indian exporters.

Exim Bank has now in place 132 LOCs, covering over 71 countries in Africa, Asia, Latin America, Europe, Oceania and the CIS, with credit commitments of over US$ 6.38 billion, available for financing exports from India. These LOCs have catalysed export of various projects in diverse sectors such as agriculture, transportation, communication, manufacturing, energy generation and transmission, rural electrification. Increasingly, LOCs are being extended for financing Indian project exports, which create, in the recipient countries, a greater visibility for Indian expertise and project execution capabilities, with downstream linkages. Established primarily to enhance Indian exports to developing countries, LOCs, today, have become an effective tool for market penetration and a stepping stone to unchartered territory of Africa and Latin American countries. Exim Bank, at the behest and with the support of Government of India, has extended the four LOCs as given below during the quarter October-December 2010:

- An LOC of US$ 100 mn to ECOWAS Bank for Investment and Development (EBID), a regional development bank set up by Economic Community for West African States (ECOWAS), for financing exports of various equipments, goods and services from India to 15 member countries of EBID in West African region viz. Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo. The earlier LOC of US$ 250 mn extended to EBID has been/is being utilised in exporting projects from India to member countries of EBID in the sectors viz. power generation and transmission, rural electrification, urban transportation, healthcare, telecommunication and food processing. India's major items for export to ECOWAS region include pharmaceuticals & fine chemicals, machinery & instruments, transport equipment, electronic goods, cotton yarn fabrics, primary and semi-finished iron and steel.
- An LOC of US$ 213.31 mn to the Government of Ethiopia, the third tranche of the total credit commitment of US$ 640 mn, for financing sugar industry rehabilitation in Ethiopia. Exim Bank had earlier extended two LOCs of US$ 122 mn as first tranche and US$ 166.23 mn as second tranche to finance sugar industry rehabilitation in Ethiopia. Exim Bank had also extended a US$ 65 mn extended for setting up an electricity transmission and distribution project in Ethiopia. Major items for export from India to Ethiopia are machinery & instruments, manufactures of metals, pharmaceutical products, electronic goods, and primary and semi finished iron and steel.
- An LOC of US$ 61.6 mn to the Government of Kenya for financing power transmission lines in Kenya. Exim Bank has also financed export of cement plants, a sugar plant and other equipments to Kenya through a regional development bank for the COMESA (The Common Market for Eastern and Southern Africa) region, known as PTA Bank. Major items for exports from India to Kenya are machinery & instruments, pharmaceutical products, manufactures of metals, primary & semi-finished iron & steel, transport & equipments, electronic goods and manmade yarn fabrics.
- An LOC of US$ 416.39 mn to the Government of Sri Lanka, to finance (i) track laying by IRCON on the Omanthai-Pallai sector, (ii) track laying by IRCON on the Madhu Church-Tallaimannar sector, and (iii) track laying on the Medawachchiya - Madhu railway line in Sri Lanka. Earlier LOCs to Sri Lanka were extended for financing purchase of equipment from India and upgradation of southern railway corridor between Colombo and Matara in Sri Lanka. Major export items from India to Sri Lanka are petroleum products, transport equipment, cotton yarn fabrics, sugar, pharmaceutical products, machinery & instruments and primary & semi-finished iron & steel.

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Indian Shipbuilding Industry: Sectoral Performance and Outlook

Shipbuilding, which includes, shipyards, marine equipment manufacturers, and a large number of service and knowledge providers, is an important and strategic industry in a number of countries around the world. Shipbuilding is a globalised, technology-based, and capital intensive industry.

The world shipbuilding statistics shows that during 2009, the world order book was close to 9226 ships, which was around (-) 18.6 percent less compared to previous year. Further, new orders during 2009 were also lower than the previous years. In fact, after 2007, new orders for shipbuilding had reduced by almost half. However, completions of the shipbuilding orders have shown improvement over the years. During the first half of 2010, total order book stood at 8817 ships.

India currently has around 32 shipyards, owned by Central Government (6), State Governments (2), public listed private shipyards (3) and privately held (around 22 However, the major share of the present ship-building capacity in India is held by eight public sector yards, with Cochin Shipyard Limited and Hindustan Shipyard Limited having capacity and infrastructure to build vessels of 1.1 lakh DWT, and 80,000 DWT, respectively. Barring these two shipyards, the majority of private sector shipyards have limited ability to build vessels in respect of capacity and size of the vessels.

According to the world order book position, during 2009, Indian shipyards had an order book of close to 260 ships constituting 1 percent share in terms of GT and 2.8 percent share in terms of number of bookings. China was top in the list with the largest number of bookings followed by South Korea, Japan. India stood at the sixth position in the world order book after return.

India has been witnessing increase in the order book position over the years, which has largely resulted from export orders. The bulk of the orders have been in the small ship segment, comprising offshore supply vessels, anchor handling tugs and cargo, although CSL (Cochin Shipyard Limited) has exported some large and medium ships.

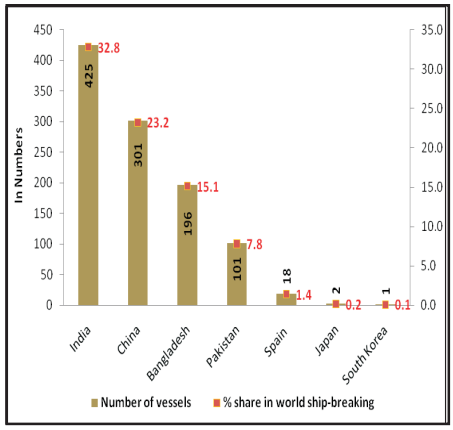
According to the Report of the Task force on Ship Building and Ship Repair Industry, constituted by Planning Commission, most of the ships, including dredgers, imported by Indian owners are fully exempted from customs duty making the existing shipbuilding industry totally unprotected in India. In fact, customs duty of about 35 percent is imposed on all capital equipment required for shipbuilding, which inflates the cost of shipbuilding in the country compared to other countries. Hence, in the current scenario it becomes cheaper to import a ship due to the exemption of customs duty on import of all ships and dredgers. The Task Force has also suggested to implement a single window clearance system for according clearance to new shipyard projects, covering land acquisition, environmental clearance, power and water etc., so that project implementation is not delayed.

Although India occupies a small percentage of the global shipbuilding market, the Indian shipbuilding industry is well positioned for growth. According to a study by the Indian Shipbuilders Association, the industry can grow at a rate over 30 percent, aided by supportive measures of the Government, including incentives for shipyards.

As growth in international trade results in increased global and domestic demand for new vessels, Indian shipyards have certain advantages over shipyards in developed nations. India possesses a large pool of technical workers, and its cost of workforce is relatively low, compared to most other shipbuilding countries. Apart from this, the Indian navy usually gives orders to Indian shipyards based on national interests.

Also, there is a need to replace the old ships in the country. According to Indian National Ship Owners Association, about 50 percent of Indian ships are aged 20 years or more and needs to be replaced. The world ship breaking statistics for 2009 also shows that, of the total world disposals of 1295 vessels, 33 percent were from India followed by China and Bangladesh (**Chart**).

Chart : Ship-Breaking Statistics for Select Countries 2009



Note: Total world disposals: 1295 vessels
Source: World Shipbuilding Statistics-Lloyd's register, Shipbuilding Statistics, October 2010, Shipbuilders Association of Japan

Shipbuilding acts as a catalyst for overall industrial growth due to spin offs to other industries, including steel, engineering equipments, port infrastructure, trade and shipping services. The indirect potential of shipbuilding industry in employment generation and contribution to GDP is therefore tremendous. The dynamics of India's economic growth will continue to create demand for new ships, and ship-building capacity within the country needs to be augmented to cater to this demand. If the domestic ship-building capacity is augmented, the benefits to the economy would be manifold, with spillover effects on other associated / ancillary sectors, and generation of employment.

Nutraceutical Industry: Sectoral Performance and Outlook

Nutraceuticals are dietary supplements which are generally used to fill nutritional deficiencies in food and to prevent diseases. Nutraceuticals are broadly divided into three segments - functional foods, functional beverages and mineral supplements, of which functional foods have the maximum share while functional beverage has the lowest.

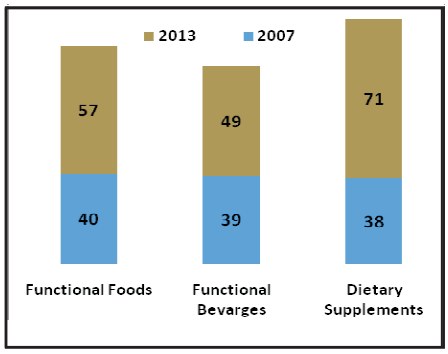
Global Market

The nutraceutical industry has emerged as an important part of the food industry. With high growth of economy, increasing income and changing lifestyles, the market is growing enormously. Globally the nutraceutical market is placed at US$ 117 billion in 2007 and is expected to touch US$ 177 billion by 2013 **(Chart)**. The dietary supplement market is expected to grow the fastest. In developed countries, predictable factors have been largely responsible for encouraging the growth of the nutraceutical industry. High disposable incomes, changing lifestyles with unhealthy eating habits, increasing incidence of health problems, larger number of aging populations having unique dietary needs to maintain health, etc. have all prompted the development of new nutritional solutions – especially nutraceuticals.

Nutraceuticals: A Ripe Market for India

The nutraceutical industry in India is at its nascent stage with a market of around US$ 1 billion. The industry looks minuscule and does not make a dent in the world's staggering US$ 117 billion nutraceutical market. But at the same time it may be noted that India's nutraceutical market today is emerging at a very rapid pace, with functional foods market which comprises the largest share. According to a report, by Ernst & Young and FICCI, the market for nutraceuticals in India is reportedly growing more than double the speed of global market at the rate of 18 percent for the last 2-3 years. With over 148 mn potential customers the Indian nutraceutical market is expected to increase by leaps and bounds in the years to come.

Chart : Global Nutraceuticals Market (US$ billion)



Source: BCC Research & FICCI

Over the last decade a wide range of products have been available, giving an insight into the tremendous growth. On one hand a booming economy has resulted in an overall increase in disposable income of population. On the other hand, there is a growing awareness on the importance of nutrition and diet for long-term good health. These have contributed to a favorable market conditions for nutraceutical industry in India. Apart from this, India has other advantages like well-qualified and intellectual human resources for setting up R&D facilities of international standards. The country is also a cost effective source of sophisticated raw materials due to technological advances in areas like fermentation processes, plant extraction and chemical synthesis. These converging economic and demographic trends in India have laid the groundwork for opportunity in nutraceutical industry.

Select Challenges

While prospects are high for this industry, India faces certain challenges too. It has a long supply chain further affected by poor infrastructure of roads, cold chain facilities, and storage conditions. The wastage of fresh food is as high as 50 percent due to lack of infrastructure facilities. Despite surplus food, the productivity of agricultural/ horticultural crops is very low and the land holding pattern is fragmented. In addition to this, the taxes levied on packaged and branded foods are very high about 30 percent in India. In comparison, the taxes in EU countries are below 10 percent and an even in other Asian countries like China, the level is only 13 percent. All these disadvantages hinder its competitive edge in the global market. The regulatory framework in India also needs attention from the relevant authorities. Globally, the regulatory authorities are aware of changing needs of consumers and proactively protect consumers by amending existing laws to accommodate changes. NLEA (Nutrition Labeling and Education Act) of 1990, DSHEA (Dietary Supplement and Health Education Act) of 1994 are fine examples of this in USA. Similarly FOSHU Act (Foods of Special Health Uses) was introduced in Japan much earlier. But the scenario in India is very different. Old laws such as Prevention of Food Adulteration Act, 1954, which regulates packaged foods, still exist for manufacturers. In addition, the industry needs to abide by many other cumbersome laws such as Standards of Weights and Measures Act, 1976, and the Standards of Weights and Measures (Packaged Commodities) Rules, 1977 (SWMA), Infant Milk Substitutes, Feeding Bottles and Infant Foods (regulation of production, Supply and Distribution) Act, 1992 with Rules, 1993 (IMS), etc., which hinders the growth of the industry.

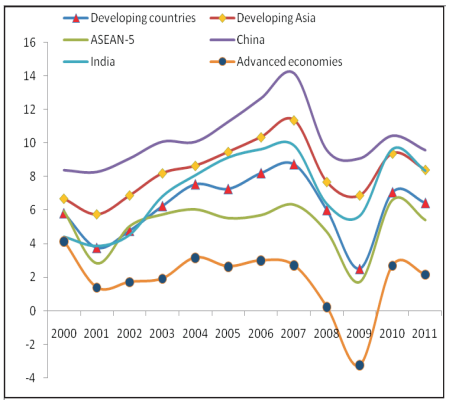
The Road Ahead

According to the FICCI and E&Y study, if appropriate regulatory framework is established the total market for nutraceuticals in India is expected to be in the range of ₹89 to ₹172 billion by 2013. There are four key drivers that are expected to propel this growth story – an increased affluence of the ever growing working population, a reduced affordability of sick care that in turn drives consumers towards wellness, an increase in physician awareness and media penetration, and finally an increased accessibility to newer distribution channels. All these tend to strengthen India's growing potential in the nutraceuticals space. Over the years, the Indian nutraceuticals market has been dominated primarily by pharmaceuticals and FMCG companies with a very few pure play nutraceutical companies. With the market maturing, a number of pure play players may be expected.

Recent Economic Developments in Developing Asia Region

Recent global developments revealed that developing economies weathered the global recession better than advanced economies. Growth in developing economies bounced back during the past year, and are poised for high growth in coming years. Recovery in developing Asia is also much stronger than initially expected and the latest trends in real GDP reveals that the region is leading the world in recovery from the recent economic crisis. In most parts of the region, resilience in domestic demand, partly resulting from proactive policy stimulus, has offset the effect of fall in exports (**Chart**).

Chart : Growth of Developing Countries vis-à-vis Advanced Economies (percent)



Source: *International Monetary Fund (IMF).*

In most Asian countries, nature of growth has gradually shifted from public sector-driven to private sector-driven. Industrial production and retail sales have been strong in countries like India and China. Robust activity in these countries helped in propelling growth in the rest of Asia. In fact, strong and sustained growth in these countries over the past several years has served as a driver for global trade, benefiting exporters of commodities and capital goods. Further, a rebound in private capital inflows has bolstered domestic demand by providing access to external financing. Developing Asia is estimated to grow by about 9.4 percent in 2010 before slightly moderating to 8.4 percent in 2011, in line with the winding down of policy stimulus and policy tightening in economies facing demand pressures.

According to IMF's *World Economic Outlook*, in China, real GDP growth is expected to average 10.5 percent in 2010 and 9.6 percent in 2011, driven by domestic demand. The slight moderation in recent activity is expected to continue through 2011 in light of tighter quantitative limits on credit growth, measures to cool off the property market and limit bank exposure to this, and the planned unwinding of fiscal stimulus in 2011. On average over 2010–11, private domestic demand is poised to contribute two-thirds of near-term growth, and Government activity about one-third.

Macroeconomic performance of India has also been robust, aided by impressive pickup in industrial production, leading recovery in South Asia. Leading indicators—the production manufacturing index and measures of business and consumer confidence—continue to point up. Real GDP is expected to grow by 9.7 percent in 2010 and 8.4 percent in 2011, led increasingly by domestic demand. Recent activity was driven largely by investment. As the strength in investment further boosts imports, the contribution from net exports is, however, expected to turn negative in 2011.

In Central Asia, higher oil and mineral prices lifted growth in natural resource exporters Azerbaijan, Kazakhstan, and Turkmenistan while industrial sector growth supported Georgia and Kazakhstan. Continued expansionary fiscal policy also sustained growth in Turkmenistan. Armenia, however, was hurt by the contraction of the agriculture sector and a decrease in remittances.

The Association of Southeast Asian Nations (ASEAN) economies, which include Indonesia, Malaysia, Philippines, Thailand, and Vietnam have also benefited from the strong regional upswing, particularly those exporting commodities and electronics. The broad-based export rebound is now feeding through an autonomous demand-driven recovery, particularly in private investment. While the macroeconomic situation in Vietnam has recently stabilised after the 2009 stimulus measures, Philippines is expected to witness strong recovery on 7 percent propelled by higher consumer spending, low inflation, and robust investments. Overall, near-term growth for the region is expected to be underpinned both by exports and domestic demand.

Asian Exim Banks Forum

The Asian Exim Banks Forum, conceived of and initiated by Exim Bank of India in 1996, seeks to enhance economic cooperation and forge stronger linkages among its member institutions, thereby fostering a long-term relationship within the Asian Exim Banks' community. The Forum is envisaged to provide a mechanism for participating countries to enter into a process of dialogue while providing an opportunity for cooperation in areas that transcend trade and investment, such as social sectors, capacity building and governance. Members of the Forum comprise Exim Banks from India, Indonesia, Malaysia, Thailand, Philippines, China, Japan, Korea and Australia, with the Asian Development Bank being a permanent invitee since 2001.

The First meeting of Asian Exim Banks was held in India in 1996, and annual meetings are held in different countries by rotation. The annual meetings serve as a forum for discussing a wide range of issues focused on fostering common understanding as well as exchanging and sharing information. The 16th Annual Meeting of the Asian Exim Banks Forum was held at Busan, South Korea during September 28-30, 2010, where member institutions discussed strategies and measures to strengthen Asia's integration, secure new growth engines, and promote intra-regional trade and investments under the theme of "Post-crisis Challenges of Asian Exim Banks: Facilitating Sustainable and Balanced Growth". Asian countries preparing to establish an Exim bank, such as Cambodia, Mongolia, and Sri Lanka were also invited as observers to this meeting in an effort to share experience and expertise in supporting national economic development.

EXIMIUS CENTRE

Exim Bank, Bangalore

Eximius Centre Activities:
Oct - Dec, 2010

In an ongoing endeavour to create an economic hub in India's North eastern region, by exploring the trade and commerce potential with ASEAN neighbours, Exim Bank has actively participated in seminar in association with Federation of Indian Exporters Organisation (FIEO) and Government of Mizoram, at Aizawl on November 18, 2010 to disseminate information on various initiatives taken by Government of India, Financial Institutions and other Support Institutions to promote exports, and the potentials and benefits for the North Eastern region in particular, and a broad overview of Foreign Trade policy. Senior Government officials from the Ministry of Commerce, Trade and Finance, Government of Mizoram also attended the programme. Exim Bank's presentation included the details of various aspects of financing programmes and products.

The Indian Pharmaceutical Industry today is in the forefront of India's science-based industries with wide ranging capabilities in the complex field of drug manufacture and technology, growing at about 8 to 9 percent annually. Exim Bank, in association with England's East Midlands, UK Trade & Investment, organised a seminar on October 29, 2010 at Hyderabad, to create opportunities for Indian Investors in Pharma Sector in UK and Exim Bank's various financing programmes for overseas investment by Indian Corporates. The seminar was attended by CEOs/CFOs/ senior executives from Pharma Industry in Hyderabad.

With the Bank's endeavor of playing the catalyst role for the export oriented unit in cluster benefit from pooling of resources in areas such as procurement and storage of raw materials, intermediates and finished products and export marketing. Exim Bank in association with FIEO organised a one day workshop on "Cluster Development & Financing" at Kanpur on November 25, 2010.

It is proposed to widen the training base of Eximius Centre by signing an MOU with a reputed consultant based in Bangalore who are engaged in corporate training & consulting. Exim Bank would avail the service of a consultant for training consultancy and developmental services for both the exporters and well as for the Exim Staff. The initiative is at negotiating stage.

Programmes in the pipeline include "Export Sensitisation programme" at Bhopal & Indore in association with CCI (M.P) and State Bank of India. Other seminars/workshops include those focusing on Country Investment agencies / SMEs/ handicrafts / Entrepreneurship Development, Export Awareness Programmes, Export procedure and documentation at Nagpur, NOIDA, Visakhapatnam, Cochin, Indore, Jaipur, Coimbatore, Kolkata, Mysore & Bangalore.

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BOOK REVIEW

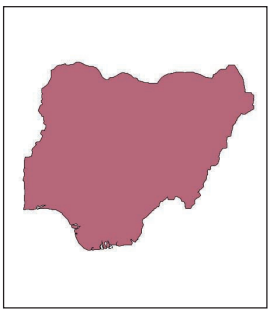
International Trade in Services: New Trends and Opportunities for Developing Countries

Services sector has gained significant importance as a key driver to economic growth, competitiveness, and poverty alleviation, helped by technological progress and the increased labour mobility. In recent years, trade in services has increasingly contributing to developing countries' export diversification and economic development strategies.

In this World Bank's publication, edited by Oliver Cattaneo, Michael Engman, Sabastian Saez and Robert M. Stern, several useful guidelines have been provided for the assessment of a country's trade potential, and a roadmap for successful opening and export promotion in select services sectors. Some of the focus sectors which have a fast growing trade potential for developing countries include accounting, construction, distribution, engineering, environmental, health, information technology, and legal services. It also identified services industries that developing countries have been able to develop given their respective comparative advantage. Case studies include, among others, how countries like India, Malaysia, and Thailand export complex medicinal procedures; how Morocco and Tunisia provide a range of legal, engineering and accounting services to Europe based on cultural ties, and how India, China, Brazil, Argentina and Egypt have competitive companies that provide constructive services.

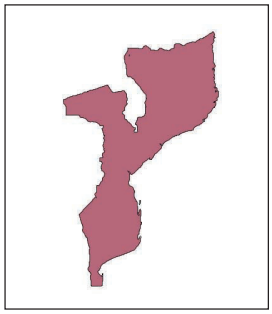
This book also provides an assessment on how policy makers can further strengthen their services industry by leveraging the changes stimulated by technological progress, and provides policy recommendations including the reduction of barriers to services trade across sectors and promotion of health and environment related development policies in parallel with the growing services market.

Nigeria



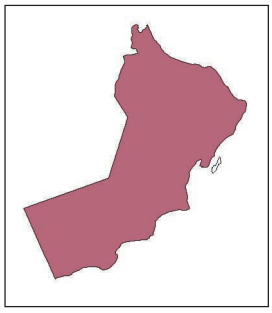
Nigeria's non-oil sector is supplying the much needed stimulus to the economy in post recession era. Strong growth in oil production is supporting the non-oil sector, driving the economy's GDP to 7.7 percent in the third quarter of 2010. Of late Nigerian Government is increasingly reaching out to non-oil sectors through its various policies. It has allotted a US$ 500 mn fund to SMEs which is expected to promote overall growth and create more employment. Along with these measures, Nigerian Government is also trying to restructure country's capital market to suit the needs of investors. This is evident from the two proposals recently discussed in Nigerian Stock Market. The first is the proposal to migrate to a modern platform of Straight Through Processing (STP), which is designed to eliminate settlement risk and ensure that all trades settle cash versus securities. The other proposal is to gradually increase the trading band from the current position to plus 10 percent up and 10 percent down which will improve trading economics. Along with this, Government of Nigeria has increased its efforts to launch a Eurobond to fund the budget deficit in 2011, which if succeed will quicken the Government returns to international capital markets in 2012-15.

Mozambique



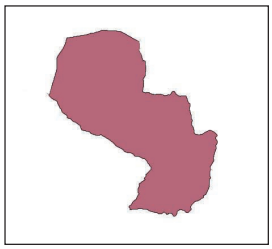
On account of large scale FDI inflows in minerals and infrastructure mega projects, rising food and cash crop production, increased coal production and growth in industrial output due to improved power supply, real GDP of Mozambique is estimated to grow by 8.5 percent in 2010 and is forecast to average at 7.3 percent in 2011 and 7.5 percent in 2012. Mozambique's real GDP grew by 7.4 percent in the third quarter of 2010, as per country's statistical agency. Tourism and foreign interest in country's banking sector has picked up recently further supporting the robust growth. Foreign investors and miners consider Mozambique as the future of metallurgical coal. Mozambique has great potential in gas production owing to its huge coal reserves which if properly utilised will boost country's growth. The recent telecom contract given to Movitel, a unit of Vietnamese cellco Viettel, is expected to result in serious price competitions and reduced tariff rates in the country.

Oman



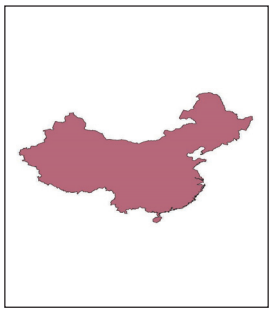
Oman's economy is heavily dependent on hydrocarbons, with oil and gas accounting for around 40 percent of GDP. Real GDP is expected to grow by 4.1 percent in 2010 owing to rising oil prices and production. In Oman, consistently high oil prices were keeping the economy growing and strong, and record budget surpluses were boosting investment in infrastructure and development projects. The Government is planning to pursue reforms that lead to diversification away from oil and gas and that promote manufacturing and tourism. The trade surplus is expected to increase further in 2011 and 2012, buoyed by higher export revenue. Exports are forecast to grow by an average of 7.2 percent over the next five years. Imports are also expected to grow strongly in 2011-12, owing to an increase in demand for consumption goods.

Paraguay



Owing to overall macroeconomic stability, continued expansion of agricultural frontier and gains in agricultural productivity, Paraguay's GDP growth is estimated to rebound to 10 percent in 2010, which is the highest rate in Latin America, and is forecast to grow close to its potential of around 4.5 percent in 2011-12. The expansion is broad-based across all sectors and underpinned by firm domestic demand. Recently CIC Resources (Canada) discovered a large-scale deposit of ilmenite (titanium dioxide) which has raised Paraguay's international profile as a potential natural resource exporter which if confirmed, would have a major bearing on Paraguay's economic development. The proximity of cheap and abundant energy from the binational Itaipú plant, which Paraguay owns jointly with Brazil, would greatly reduce the operating costs of the energy-intensive processing of the ilmenite ore and enhance the viability of developing the deposit significantly. The titanium find comes as plans by Rio Tino Alcan (RTA), Canada, are advancing for the construction of an aluminium plant close to Itaipú, which would use imported bauxite as feedstock. The aluminium plant would use green technology, giving it the lowest carbon emissions in the world.

China



The unexpectedly high performance of Chinese economy in 2010 lead to a higher estimated GDP growth of 10.2 percent in 2010 compared to 9.1 percent in 2009. This stronger growth has been driven by rising activity in all parts of the economy, due to loose credit conditions and a Government-backed stimulus package that has boosted investment. High levels of job creation and rising wages should ensure sustained rapid growth in consumption. The merchandise exports are forecast to expand by a rapid 12.3 percent a year in 2011-15. Large proportion of China's imports consists of components that are assembled in the country before being shipped abroad again. Chinese imports and exports tend to expand at similar rates. China's current-account surplus stood at a massive US$ 297 billion in 2009. The ongoing expansion of the provision of social services (in particular healthcare, education and pensions) is expected to support growth in state spending.

Currency Currents

South African Rand (ZAR)

The Rand (R), denoted by ZAR, is the currency of the Common Monetary Area between South Africa, Namibia, Swaziland and Lesotho. It takes its name from Witwatersrand (White-waters-ridge in English), a ridge upon which Johannesburg is built and where most of South Africa's gold deposits are found. The Rand was first introduced in 1961 with the establishment of the Republic of South Africa. A Rand was worth more than a US dollar from the time of its inception in 1961 until 1982, when mounting political pressure combined with sanctions placed against the country started to erode its value. The currency broke above parity with the dollar for the first time in March 1982, and has gradually depreciated since then. During the period since April 2009, the Rand touched a low of 1 US$ = R 9.335 in April 2009 and a high of 1 US$ = R 6.73 in October 2010. The Rand has gained since then on account of an increase in the price of gold and platinum. South Africa is the largest producer of gold and platinum in the world.

Domestic inflation has moderated to lower-than-expected levels since May 2010, restrained by the relatively weak domestic demand conditions and the further appreciation of the foreign exchange rate of the rand. Economic growth was below expectations in the second quarter of 2010 and is projected to remain below potential for some time.

The domestic inflation outlook has also improved recently, with the forecast for the targeted inflation rate being revised downwards. Inflation is expected to remain below the upper level of the 3 to 6 percent target inflation range over the period to 2012. This improvement created sufficient space for monetary policy to provide additional stimulus to the somewhat fragile recovery of the domestic economy, allowing the repurchase rate to be reduced by 50 basis points to 5.5 percent in November 2010. As on December 08, 2010 1US$ = 6.97 ZAR.

Swiss Franc (CHF)

The Swiss franc, denoted by CHF (which stands for the Confoederatio Helvetica franc), is the official currency of Switzerland and Liechtenstein. The currency is issued by the Central Bank of Switzerland. The Swiss franc is the only remaining currency in Europe that is still named franc. With the US going into recession and the US dollar hitting record low against major currencies of the world, it is expected that Swiss franc will continue to strengthen against the US dollar. The Swiss franc has been appreciating against Euro and US dollar on account of weakness in global equity markets, Middle East tensions and demand for defensive currencies.

The Swiss National Bank (SNB) is maintaining its expansionary monetary policy. It is leaving the target range for the three-month Libor unchanged at 0.00–0.75 percent, and intends to keep the Libor within the lower part of the target range at around 0.25 percent. Since mid-2009, the Swiss economy has developed more dynamically than previously expected. For 2010, the SNB expects real GDP to grow at a rate of approximately 2.5 percent. For the second half of the year, and in particular for 2011, however, the SNB now expects a marked slowdown in growth. This reflects the strong appreciation of the Swiss franc and the declining momentum of the global economy. The SNB's new conditional inflation forecast is lower than the June forecast, over the entire forecast horizon. Assuming an unchanged three-month Libor of 0.25 percent, average inflation for 2010 is expected to amount to 0.7 percent, for 2011 to 0.3 percent and for 2012 to 1.2 percent. The possibility that inflation will temporarily turn slightly negative at the beginning of 2011 cannot be ruled out. As on December 09, 2010, CHF was quoted at 0.9827 to the US dollar.

Indian Rupee

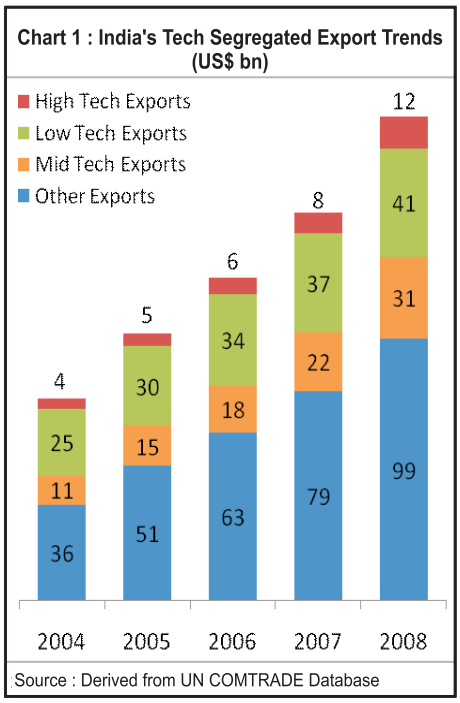
The Indian rupee (INR) is the official currency of the Republic of India. The issuance of the currency is controlled by the Reserve Bank of India (RBI). The Indian Rupee Symbol is derived from the Devanagari consonant "₹" (Ra) with an added horizontal bar. The parallel lines at the top (with white space between them) make an allusion to the tricolor and also depict an equality sign which symbolises the nation's desire to reduce economic disparity.

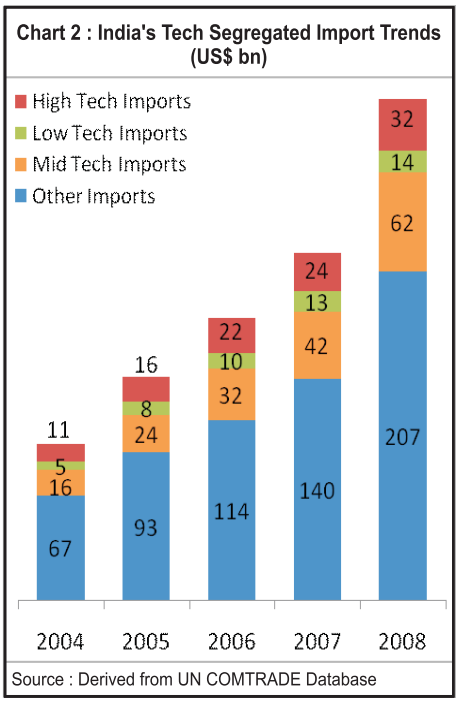
Officially, the Indian rupee has a market determined exchange rate. However, the RBI trades actively in the US$/₹ currency market to impact effective exchange rates. Thus, the currency regime in place for the Indian rupee with respect to the US dollar is a de facto controlled exchange rate. This is sometimes called a managed float. It should be noted, however, that unlike China, successive administrations (through RBI, the central bank) have not followed a policy of pegging the INR to a specific foreign currency at a particular exchange rate. RBI intervention in currency markets is solely to deliver low volatility in the exchange rates, and not to take a view on the rate or direction of the Indian rupee in relation to other currencies.

The growth in Indian economy has recovered to near pre-crisis levels with FY11 GDP likely to come in at 8.4 percent and rise further to 8.6 percent in FY12. Trends in consumption on the rural side have been supported by: (1) the Government's employment programmes; and (2) the good harvest, while urban consumption is reflective of pent-up demand and consumer confidence. On the investment side, the upturn will likely be supported by the Government's emphasis on infrastructure, which is expected to double to ₹40 trillion during the 12th Plan period (FY13-FY17) from ₹20 trillion in the current plan (FY08-FY12).

On the external account, despite an uptrend in invisibles (software exports and remittances), a deceleration in exports coupled with the continued buoyancy in imports will likely result in the current account deficit crossing 3 percent of GDP. While capital flows are likely to be more than sufficient, a key concern is the composition of flows. Recent trends indicate a deceleration in FDI. This is a concern especially in an environment which has been oscillating between risk on-off. Given the core FX theme of structural dollar weakness and India's strong domestic growth, market expects the INR to strengthen to ₹ 43.5/US$ by March 2011 and ₹ 42/US$ by March 2012. As on December 09, 2010, INR was quoted at ₹ 45.05 to the US dollar.

India's International Trade: A Tech Segregated Perspective





India's international trade during the recent past has witnessed an increasing trend, save for 2008-09 which recorded a deceleration, essentially due to the global economic meltdown. While this growth has been broad based, spread across sectors and regions, an analysis on the technology intensiveness of India's recent trading patterns throws up some interesting insights. The technological classification of trade in terms of high, medium and low is based on the Standard International Trade Classification (SITC), Revision 3, as adopted by the United Nations Industrial Development Organisation (UNIDO).

India's exports have gradually tended to move away from low technology in favour of medium and high technology products. This is manifested in the share of low technology exports in India's total exports coming down from 33 percent in 2004 to 28 percent in 2008 **(Chart 1)**. As against this, the shares of medium and high technology exports have increased from 14 percent to 17 percent and from 5 percent to 7 percent, respectively. This trend is a consequence of higher growths exhibited by high and medium technology exports.

While exports of medium tech products increased by more than twice from US$ 11 billion in 2004 to US$ 31 billion in 2008, exports of high tech products trebled from US$ 4 billion to US$ 12 billion during the same period.

This is in stark contrast to trends in India's tech segregated imports, wherein each of the three technology intensive categories have more or less maintained their shares in the country's overall exports during the 2004-2008 period, implying that imports have not exhibited any perceptible shift in terms of technology intensity. While imports of low tech products increased from US$ 5 billion in 2004 to US$ 14 billion in 2008, imports of medium and high tech products increased from US$ 16 billion and US$ 11 billion to US$ 62 billion and US$ 32 billion, respectively **(Chart 2)**.

In terms of composition of high tech exports, pharmaceutical products contributed a large share. Thus, medicaments were the largest high tech export item from India in 2008, with exports totalling US$ 3.1 billion in 2008. Other pharmaceutical products among the top ten high tech exports during 2008 included antibiotics, both as medicaments or otherwise (US$ 1.9 billion) and hormones used as medicaments (US$ 0.4 billion). The other major high tech exports included parts of aircraft, equipment (US$ 1.4 billion), electric generating sets (US$ 1.3 billion), parts of electric power machinery, diodes and transistors (US$ 0.6 billion each) and electrical transformers (US$ 0.4 billion). The encouraging aspect of India's high tech exports is the fact that all the top ten items have shown robust growth with three of them exhibiting average annual growths of over 100 percent during the 2004-2008 period.

A product wise analysis of India's high and medium technology exports and mapping them to the world demand patterns during the 2004-2008 period illustrates the list of products within the realm of high and medium technology items that have shown maximum dynamism and where India could focus on to realise potentially higher values, especially when considering that the country already possesses manufacturing capabilities for these products. The import market for these illustrative products amounted to US$ 240 billion for high tech products (with India's share being less than 1 percent) and US$ 438 billion for medium technology products (India's share less than 1.5 percent) **(Table 1 and Table 2)**. These illustrative products have been based on the criteria that during 2008, the world import demand was at least US$ 10 billion and that India's exports were at least US$ 50 mn (US$ 100 mn for medium tech products).

Table1: Dynamic High Tech Products (World Market: US$ 240 billion)

Products	World Imports (US$ mn)	India's Export (US$ mn)	AAGR % of India's Export
Power Generating Machines			
Electric generating sets	24,136	832	154%
Electric motors and generators, both AC & DC	29,970	223	30%
Telecom & Sound Equipment			
Electrical apparatus for line telephony	20,527	74	37%
Machinery			
Diodes, transistors & semiconductor devices	73,609	561	54%
Electrical transformers	16,685	421	48%
Scientific Instruments			
Instruments for checking level, pressure etc. of liquids or gases	14,945	65	40%
Drawing, marking-out or mathematical calculating instruments	30,698	70	44%
Automatic control instruments	29,615	58	20%
TOTAL	**240,185**	**2,304**	**55%**

Table 2: Dynamic Medium Tech Products (World Market: US$ 447 billion)

Products	World Imports (US$ mn)	India's Export (US$ mn)	AAGR % of India's Export
Chemicals			
Poly carboxylic acids & their derivatives	17,622	190	18%
Metal Products			
Semi-finished products of iron & steel	35,400	541	82%
Ferro alloys (excl. radioactive ones)	36,946	1,431	79%
Machinery & equipment			
Internal combustion piston engines, and parts	13,762	224	25%
Heating & cooling equipment	43,652	487	46%
Air, vacuum pump; filtering, purifying machinery	79,333	495	49%
Transmission shafts and cranks	10,477	122	40%
Electrical switch apparatus, <1000v; panels	114,797	518	48%
Batteries and electric accumulators	37,959	120	28%
Transport equipment			
Ships, boats and other vessels	40,432	1,371	102%
Invalid carriages, whether or not motorized or mechanically propelled	16,301	300	22%
TOTAL	**437,562**	**5,799**	**51%**

Note: Data is for 2008; Average Annual Growth Rate (AAGR) is for the 2004-08 period
Source: Derived from UN COMTRADE Database at SITC-4 digit level classification

The trends in India's technology intensive exports reflect increased investment in R&D, not only by Indian companies but also by a growing number of foreign companies who are establishing R&D centres in India. Simultaneously, more and more Indian companies have been investing in high-tech companies overseas, in pursuit of technology. Moreover, the Eleventh Five-Year Plan not only emphasises innovation but also foresees a massive outlay on science and technology via a budgetary increase of over 200 percent. Going forward, these initiatives are likely to further bolster India's technology intensive exports, thereby facilitating a movement up the industry value chain.

Note: Indian Rupees are referred in crores and lakhs:

1 crore : 10 million
1 lakh : 100 thousand

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