FICCI

BACKGROUND PAPER ON

INDIA-ISRAEL Economic Partnership



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Foreword



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At the time when India-Israel ties are scaling new heights, we put forth this background paper that focuses on the dynamics of this relationship. This background paper aims to showcase to the readers the magnitude of the business opportunities as the two countries strengthen their economic ties.

Israel has become one of India's most important partners, particularly in critical areas of security, defence, agriculture and water management. The background paper aims to steer the investment & business decisions of the state, the traders, capitalists, and businessmen in a Pareto efficient way. There is immense potential for growth in areas like healthcare, medical devices, pharmaceuticals, agriculture, irrigation, energy, particularly from renewable sources, aviation, IT and water management. We have highlighted the trade opportunities across the different sectors, especially focusing on areas that have a mutually beneficial trade advantage.

As a part of our efforts to strengthen relation with Israel, FICCI has been proactively engaged in creating better understanding of the areas of cooperation, which Indian Companies will be willing to explore in Israel and transcend the engagements with Israel at a strategic level. The background paper examines the current state of affairs across different areas like trade and investment in priority areas. We also take a retrospective look at the overall economic growth and development trends of Israel, especially its resilience towards the global crisis.

Through this background paper, we hope to highlight the increasing engagement of India with Israel.

With Best Regards

Yours Sincerely

Ambika Sharma

Ambika Sharma

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Executive Summary

Twenty years after New Delhi and Tel Aviv established diplomatic ties - marked in January 2012 - India and Israel are on the cusp of a paradigm shift in business and economic ties. Even as Tel Aviv remains a valued partner for New Delhi in areas as varied as defence and agriculture, the next decade of diplomatic engagement could well be defined by new frontiers of cooperation in agriculture, science and technology and R&D and emerging areas like homeland security and life sciences, all of which offer promise of increased economic content to our existing political relationship.

Israeli companies have invested in India in energy, renewable energy, telecom, real estate and water technologies. Israeli companies are also setting up Research and Development (R&D) centres or production units in India that can bolster efficiency and productivity. Similarly, Indian companies such as Jain Irrigation, TCS are marking their presence in Israel through mergers and acquisitions and opening offices. Several key Indian companies have made significant investments in Israel.

There is a need to strengthen the bilateral ties between the two countries, and this will help in strengthening the social and economic engagement and business linkages between the two countries. There is immense potential for growth in areas like healthcare, medical devices, pharmaceuticals, agriculture, irrigation, energy, particularly from renewable sources, aviation, IT and water management.

This study tries to explore the trade opportunities across the different sectors, especially focusing on areas that have a mutually beneficial trade advantage. Emphasis has also been laid on prioritizing key sectors like defence, energy, water management, IT and ITes and also tourism.

FICCI is working closely with industry bodies/chambers and trade & investment promotion agencies in facilitating such bilateral dialogues. This paper delves into the current state of affairs between India and Israel in terms of trade, import-export, defence services, power generation, oil and gas etc. There has been an effort to take a retrospective look at the overall economic growth trends of Israel, especially its resilience to the global crisis. This study tries to analyse the trends and direction of trade in the future.

Bilateral Relations

India and Israel enjoy extensive economic, military and strategic relationships. Mr SM Krishna, former External Affairs Minister visited Israel in 2012 to mark 20 years of diplomatic relations. During his visit, Mr Krishna met the entire top leadership in Israel, a sign that the relationship, which has evolved rapidly in the past couple of decades, is one of India's most important. He discussed the importance of the growing technology ties between the two countries, spanning defence and space technologies, information and pharmaceutical as well as a burgeoning security relationship. India will be looking at more counter-terror and defence cooperation with Israel, but the two countries plan to diversify ties.

To take forward the interest expressed by Mr S M Krishna in the energy sector, Minister for National Infrastructure of Israel, Mr Uzi Landau, who also holds the Energy & Water Resources portfolio, visited India in February 2012 to discuss energy ties as well as link-ups in developing rural and urban infrastructure.

Subsequent to Mr Krishna's visit in 2012, some important Indian leaders such as Mr Kamal Nath - Minister of Urban Development, Mr Kapil Sibal -Minister of Communications, Information Technology and Human Resource Development, Mr Subodh Kant Sahai - Minister of Tourism visited Israel to further strengthen economic ties with the country and explore collaboration possibilities.

India, Israel sign MoU on research programme

On August 02, 2012, India and Israel entered into a memorandum of Understanding (MoU) for launching a programme that would promote collaborative research across a wide range of disciplines from medical and information technology to social sciences, humanities and arts. The programme, which will run for five years will provide support up to US $ 1,00,000 a research project for three years. The MoU was signed by Chairman of the Israel science Foundation professor Benjamin Geiger and Chairman of University Grants Commission Ved Prakash.

Israeli Consulate

The third consulate of Israel was opened in Bangalore in 2012 which indicates the extent to which Israel values ties with India. The common interests in the fields of water conservation, renewable energy, IT and biotechnology, provided the basis for cooperation between the two countries. Both Israel and India have a large number of small and medium businesses, which are the source of innovation. There is a strong need to build business-to-business relationships, encourage partnerships among scientific research organizations and catalyze government- to-government interaction at regular intervals to take this relationship to strategic level.

Bilateral Agreements

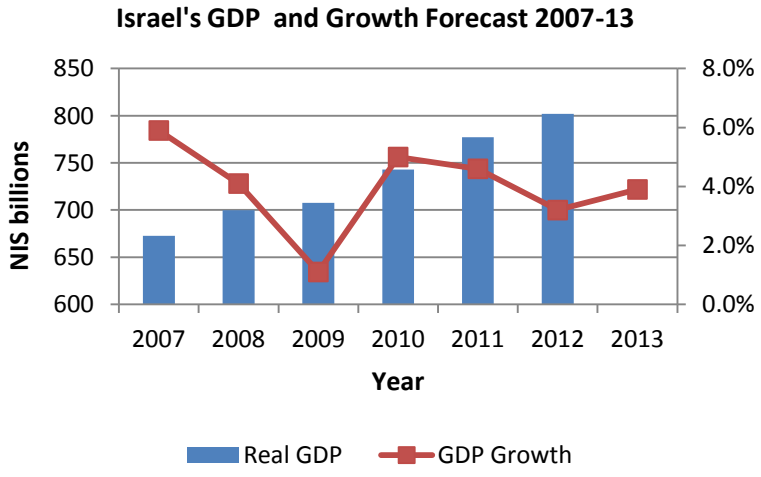
Bilateral agreements	Agreement Date
Establishment of Full Bilateral Diplomatic Relations	29.01.1992
Agreement for the Promotion and Protection of Investments	29.01.1996
Convention for the Avoidance of Double Taxation and for the Prevention of Fiscal Evasion with Respect to Taxes on Income and on Capital	29.01.1996
Bilateral Agreement regarding Mutual Assistance and Cooperation in Customs matters	29.01.1996
Agreement on Cooperation in Peace Uses of Outer Space	28.10.2002
Agreement on Cooperation in the field of Health and Medicine	09.09.2003
Agreement on Cooperation in combating illicit trafficking and abuse of narcotic drugs and psychotropic substances	09.09.2003
Agreement on Cooperation in the field of Protection of the Environment	09.09.2003
Agreement on Exemption of Visa requirement for holders of diplomatic, official and service passports	09.09.2003
Memorandum of Understanding on India-Israeli Research and Development Fund Initiative	30.05.2005
Inter-Governmental Work Plan on Agriculture Cooperation	10.05.2006
Agreement for Transfer of Sentenced Persons	09.01.2012
Extradition Treaty	09.01.2012

Economic Overview of Israel

The global financial crisis of 2008-09 spurred a brief recession in Israel but the country overcame the tough situation with the solid fundamentals – marked by years of prudent fiscal policy and a resilient banking sector. The Israeli economy, unlike a majority of developed economies, recovered quickly from the crisis achieving in the course of 2010-12 the highest growth rates among the developed countries, despite the slight slowdown in the growth rates, starting from the second half of 2011.

The Israeli economy significantly improved in 2010-2011 recording GDP growth rates of 5.5 percent and 4.6 percent respectively, an improvement from growth of 1.1 percent in 2009. The quick recovery of the economy was mainly driven by exports of goods and investments. Nevertheless, economic growth in Israel slowed down from the second half of 2011, reaching a rate of 3.2 percent in 2012. Even then, the growth rate of Israel remained among the highest in the OECD.

Figure 1 below, shows that while GDP growth plummeted to -2.5 percent in 2009, it had bounced back to 5.5 percent in 2010 and 4.6 percent in 2011. Economic growth will remain sluggish in 2013, before running at a more robust pace in 2014-17, and is forecasted by OECD's Economic Outlook, to reach 3.9 percent in 2013.



Israel in Nutshell

Political Structure: The Israeli system of government is based on parliamentary democracy, with Prime Minister as the head of the government and President is in the ceremonial role. For governmental purposes, Israel is divided into six districts: Central District; Haifa District; Jerusalem District; Northern District; Southern District; Tel Aviv District.The President was elected for seven year term by the Knesset in 2007 elections and next elections are scheduled for 2014.

Economy: Israel has a technologically advanced market economy. Its major imports include crude oil, grains, raw materials, and military equipment. Cut diamonds, high-technology equipment, and pharmaceuticals are among the leading exports. Israel usually posts sizable trade deficits, which are covered by tourism and other service exports, as well as significant foreign investment inflows. The economy has recovered better than most advanced, comparably sized economies from the global financial crisis in 2008. In 2010, Israel formally acceded to the OECD. Israel's economy also has weathered the Arab Spring because strong trade ties outside the Middle East have insulated the economy from spillover effects In mid-2011, public protests arose around income inequality and rising housing and commodity prices. The government formed committees to address some of the grievances but has maintained that it will not engage in deficit spending to satisfy populist demands.

Taxation: Corporation tax rose from 24% to 26% in 2012. The top rate of income tax rose from 44% in 2010 to 48% in 2012 and increased further, to 50%, for the highest earners at the start of 2013. Capital-gains tax rates also rose in 2012. Value-added tax (VAT) was increased from 16% to 17% in September 2012 and to 18% in June 2013. Customs duties are to be cut gradually in 2013-17. Foreign investment, venture capital and expenditure on research are eligible for extensive tax benefits.

Source: The Economist Intelligence Unit

This downtrend is attributable to the global economic uncertainty (resulting from the Eurozone crisis, US financial crisis and the slowdown in the emerging economies) as well as the geopolitical situation in the Middle East, which among other things led to a sudden stop of natural gas supply from Egypt.

The surge in growth rates during the period mid-2009 to mid-2011 was due to investments in fixed capital and exports of goods and services. The increase in fixed capital investments was due to accelerated investment in residential construction as a result of significant increase of housing prices, investments in infrastructure for extracting natural gas from the Mediterranean Sea and Intel's investment in the upgrade of its production facilities in Kiryat Gat. The second half of 2011 witnessed a decline in investments recording even negative growth in recent quarters of 2012.

Major Economic Indicators of Israel

Israel's growth proved to be robust enough to withstand the consequences of the financial downturn of 2008.

	Units	2007	2008	2009	2010	2011	2012
GDP, constant prices	*NIS Billions*	672.241	699.875	707.619	742.881	777.087	801.204
GDP, constant prices	*Percent change*	5.897	4.111	1.106	4.983	4.605	3.104
GDP, current prices	*NIS Billions*	683.352	723.035	765.958	813.938	871.827	928.348
GDP, current prices	*USD Billions*	166.343	201.514	194.785	217.69	243.654	240.894
Real change in per capita GDP	*Percent change*	4.0%	2.2%	-0.7%	3.1%	2.7%	1.3%
Real change in business GDP		6.0%	4.4%	0.5%	5.4%	5.1%	3.3%
Consumer Price Index		85.7	89.6	92.6	95.1	98.3	100
Imports of Goods	*USD Billions*	56.6	65.2	47.4	59.2	73.5	73.1
Exports of Goods	*USD Billions*	54.1	61.3	47.9	58.4	67.8	63.1
Trade balance of Goods	*USD Billions*	-2.5	-3.8	0.6	-0.8	-5.7	-10
Imports of Services	*USD Billions*	17.5	19.8	17.2	18.1	20.2	-
Exports of Services	*USD Billions*	20.3	23.9	21.5	24.8	26.8	-
Trade balance of Services	*USD Billions*	2.7	4.1	4.3	6.6	6.6	-
FDI Inflows	*USD Millions*	8978	10875	4438	5510	11374	7467
FDI Outflows	*USD Millions*	4581	5616	693	8567	2998	-

Source: Central Bureau of Statistics, Trade Maps

Israel demonstrated its economic strength during the times of contraction and its capability during the boom years.

Economic growth will remain sluggish in 2013 before running at a more robust pace in 2014-17. According to the Economic Intelligence Unit, the fiscal deficit will remain large in 2013, but it will narrow significantly thereafter. Inflation will remain low in the short term, but will reach 13 percent in 2014-17.The current account position will strengthen particularly after 2014.

Long – term Forecast for Israel

Economic growth is projected to average a respectable 3.7% a year in 2012-30. Long-term growth will be supported by Israel's high level of technological innovation and its investment in research and development, on which it spends a larger proportion of GDP than any country in the world. Natural gas extraction will boost the economy. Despite Israel's high levels of education, skills shortages could become a constraint on growth in the high-tech sector. The working-age population will expand, but labour participation will improve only gradually, as more Arabs and ultra-Orthodox Jews enter the workforce.

Source: The Economist Intelligence Unit

Sectoral Composition of the Economy of Israel

Israel being a highly industrialized and diversified country, has a relatively open and export-oriented economy. High rates of GDP growth of the country is attributed to rapid expansion of high technology activities over the past two decades. The economic structure of Israel is dominated by high-technology goods and services. The main hi-tech industries besides defence are computer component manufacturing, software engineering, medical technologies and pharmaceuticals. Since diamond accounts for 30 percent of total merchandise export of Israel, the country plays a significant role in the world's diamond industry.

Sector composition of the economy of Israel

Share of Net Domestic Product	**2007**	**2008**	**2009**	**2010**	**2011**
Agriculture, Forestry and Fishing	**1.9**	**2.0**	**2.3**	**2.0**	**1.9**
Industry	**22.7**	**22.1**	**21.2**	**21.3**	**21.7**
Manufacturing	**16.0**	**15.2**	**14.3**	**14.2**	**14.0**
Electricity and water	**1.0**	**1.0**	**1.3**	**1.2**	**1.1**
Construction	**5.7**	**5.9**	**5.6**	**6.0**	**6.4**
Services	**75.4**	**75.9**	**76.5**	**76.7**	**76.4**

Source: Central Bureau of Statistics

The services sector is the leading economic activity in Israel, accounting for around three quarters of the GDP and employment. Agriculture sector was important to early economic development of the country, but the sector now accounts for only around 2 percent of GDP.

Foreign Trade and the Balance of Payments

There was a decline in the growth of exports in the beginning of 2011 due to slowing of international trade, the worsening of Israel's trade conditions, the shekel's appreciation and the upgrade of Intel's Kiryat Gat production facilities. However, there was an improvement in trade conditions and completion of Intel's upgrade in the second quarter in 2012. Exports increased at 0.1 percent only in 2012 after showing a growth of 13.5 percent and 5.5 percent in 2010 and 2011 respectively.

In 2011-12 there were increased imports of equipment for the construction of natural gas infrastructure and for the production of Intel production facilities upgrade. There was also a sharp rise in imports of energy resources following the disruption in the supply of natural gas from Egypt. The imports of goods and services showed growth of 3.4 percent which was much below the growth rates recorded in 2010 (12.5 percent) and 2011 (11.1 percent). The fluctuations in imports were a result of imports of energy resources which will continue till the start of production of natural gas from the Tamar reserve.

From Q2 of 2012 onwards, the surplus in the balance of payments began to gradually decrease and it was in deficit by the end of Q4-2012. The Israeli economy was forced to switch to more costly energy resources due to disruption of natural gas supply from Egypt. The higher spending on energy imports led to deficit. The production from the Tamar field, beginning mid-2013, is expected to meet all of Israel's natural gas demand and is likely to improve the current account of the balance of payments.

Composition of Trade

The composition of Israel's merchandise trade reflects the industrialized nature of the economy. Exports consist mainly of manufactured goods, in particular high-tech products, which accounted for more than 90 percent of total merchandise exports since 2008.

Merchandise Exports share by Commodity groups-2012

Commodity Group	Percentage share
Agriculture	3.6%
Fuels and Mining Products	2.4%
Manufactures	93%

Source: WTO secretariat based UNSD

The composition of Israel's merchandise trade, in particular that of exports, changed slightly over the last five years. The share of agriculture remained constant at slightly above 3 percent, while that of manufactures increased from around 83 percent in 2005 to 93 percent in 2012.

Top 10 Export Commodities 2007-2012(US$ Millions)

		Value in 2007	Value in 2008	Value in 2009	Value in 2010	Value in 2011	Value in 2012
TOTAL	All products	54091	61337	47935	58413	67796	63141
'71	Pearls, precious stones, metals, coins, etc	19060	1996	12090	16867	21175	17975
'85	Electrical, electronic equipment	6962	7111	8567	8136	8211	8527
'30	Pharmaceutical products	3467	479	452	6435	7038	6541
'84	Machinery, nuclear reactors, boilers, etc	3979	4161	3036	3477	3949	4301
'90	Optical, photo, technical, medical, etc apparatus	3164	3239	2741	3466	4048	3950
'38	Miscellaneous chemical products	2335	3515	2627	3115	4187	3031
'39	Plastics and articles thereof	2328	2564	1874	2029	2490	2320
'29	Organic chemicals	1417	1622	1293	1505	1920	2072
'31	Fertilizers	1138	2570	1115	1795	2112	1795
'88	Aircraft, spacecraft, and parts thereof	1504	1319	1758	1693	1855	1693

Source: UNCOM Trade

The share of diamonds in the total value of merchandise exports declined from 37 percent in 2005 to 30 percent in 2012, while that of pharmaceuticals almost doubled. Nevertheless, pearls, precious stones, metal coins etc. remain the leading export item in the export basket of Israel.

Merchandise Imports share by Commodity groups-2012

Commodity group	Percentage Share
Agriculture	8.3%
Fuels and Mining Products	20.2%
Manufactures	71.0%

Source: WTO secretariat based UNSD

The share of agriculture in the total merchandise imports, in particular food products, increased slightly between 2005 and 2012, while the share of manufactures declined. The main imported items were fuels, raw diamonds, chemicals, office machines and telecommunications equipment, and non-electrical machinery.

Direction of Trade

The West Asia conflict had impeded Israel's trade with its neighbours. As a result, the United States and the European Union became the main trading partners of Israel with the share of 29 percent and 28 percent of total merchandise exports respectively. The United States and the European Union are also the main sources of Israel's imports with a total share of 46 percent of merchandise imports.

Top 10 Import Commodities 2007-2012(US$ Millions)

		Value in 2007	Value in 2008	Value in 2009	Value in 2010	Value in 2011	Value in 2012
TOTAL	All products	56619	65171	47363	59194	73526	73112
'27	Mineral fuels, oils, distillation products, etc	8928	12842	8066	10441	13636	1608
'71	Pearls, precious stones, metals, coins, etc	10398	9688	5562	8699	11108	8539
'84	Machinery, nuclear reactors, boilers, etc	6091	6859	4841	5575	8078	7794
'85	Electrical, electronic equipment	5365	5870	5250	5964	7381	7681
'87	Vehicles other than railway, tramway	3526	4225	3541	4421	4852	4237
'39	Plastics and articles thereof	2112	2243	1570	2026	2352	2324
'29	Organic chemicals	1534	1928	1312	1655	1911	2033
'90	Optical, photo, technical, medical, etc apparatus	1709	1735	1433	1645	1995	1915
'30	Pharmaceutical products	1049	1289	1358	1410	1595	1617
'72	Iron and steel	1256	1491	834	1166	1513	1369

Source: UNCOM Trade

The Asian countries accounted for approximately 25 percent of total merchandise exports in 2012. Asia's share in total merchandise imports was recorded at 22 percent of total imports for the same period. The change in export destinations seems to have been facilitated by the global crisis and developments in its aftermath: rapid recovery in Asia against sluggish recovery of demand in western countries, as well as expectations of another crisis in Europe.

China stood at the second position as the source of Israel's merchandise imports. United States remains the main origin for Israel's imports, although its share is declining. The United States is also by far the main destination for Israel's exports, accounting for almost 29 percent of total merchandise exports in 2012, although, again, its share is on a downward path. Other key markets for Israel's exports are Hong Kong, China, Belgium and India.

India's Trade with Israel

Since the establishment of diplomatic relations between India and Israel, the bilateral trade has increased significantly from US$ 200 million in 1992-93 to US$ 6,034 million in 2012-13. During the early years, the trade between two countries comprised primarily of diamonds but it has diversified in recent years.

India-Israel Trade (in US$ Millions)

	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
EXPORT	**1,458.55**	**1,968.59**	**2,919.78**	**4,040.52**	**3,738.96**
%Growth		34.97	48.32	38.38	-7.46
India's Total Export	1,85,295.36	1,78,751.43	2,51,136.19	3,05,963.92	3,00,274.12
%Growth		-3.53	40.49	21.83	-1.86
%Share	0.79	1.1	1.16	1.32	1.25
IMPORT	**2,090.41**	**1,885.06**	**2,253.51**	**2,577.69**	**2,295.52**
%Growth		-9.82	19.55	14.39	-10.95
India's Total Import	3,03,696.31	2,88,372.88	3,69,769.13	4,89,319.49	4,91,945.05
%Growth		-5.05	28.23	32.33	0.54
%Share	0.69	0.65	0.61	0.53	0.47
TOTAL TRADE	**3,548.95**	**3,853.66**	**5,173.28**	**6,618.21**	**6,034.47**
%Growth		8.59	34.24	27.93	-8.82
India's Total Trade	4,88,991.67	4,67,124.31	6,20,905.32	7,95,283.41	7,92,219.17
%Growth		-4.47	32.92	28.08	-0.39
%Share	0.73	0.82	0.83	0.83	0.76
TRADE BALANCE		**83.53**	**666.27**	**1,462.83**	**1,443.44**
India's Trade Balance	-1,18,400.95	-1,09,621.45	-1,18,632.94	-1,83,355.57	-1,91,670.93

Source: Export Import Databank, Ministry of Commerce & Industry

Major exports from India to Israel include precious stones and metals, chemical products, textile and textile articles, plants and vegetable products, mineral products, rubber and plastic products, base metals and machinery.

Major imports to India include precious stones and metals, chemical and mineral products, base metals, machinery and transport equipment.

India-Israel Foreign Trade Agreement

India and Israel have shown strong desire and political will to conclude an FTA. Seven rounds of negotiations have been held so far. It is expected that an FTA would raise the annual trade volume between the two countries threefold upto $ 15 billion. There is immense potential for growth in areas like healthcare, medical devices, pharmaceuticals, agriculture, irrigation, energy, particularly from renewable sources, aviation, IT and water management.

In 2012, Israel's Finance Minister Mr Yuval Steinitz had signed orders to remove customs and purchase tax on all industrial and consumer goods other than vehicles and vehicles parts. The order had removed 8-12 percent customs duty on a wide range of consumer goods including washing machines, vacuum cleaners, microwaves, hair dryers, toasters, electric blankets, electric toothbrushes, home coffee makers, light bulbs and glasses. The Ministry of Finance had decided to lower the customs duty rates on various goods, for which there was no Israeli production. While the

move was primarily driven by the need to address consumer demands, given its depth and breadth, it was welcoming move for companies importing their goods into Israel.

Foreign Trade Agreement between India and Israel would prove beneficial to both sides. Israel's demand covers the maximum scope of customs book that is, around 80-90%. They are negotiating products from various sectors such as pharmaceuticals, chemicals, IT and agriculture. An FTA will open the gates to those products which are not yet exported due to low competitiveness.

Foreign Direct Investment

In recent years, Foreign Direct Investment (FDI) in Israel increased significantly between 2004 and 2008, from US$ 2.9 billion to US$ 10.9 billion. Following world patterns, FDI inflows declined sharply, by almost 60 percent, in 2009 and recovered marginally in 2010, to US$ 5.5 billion; inflows more than doubled in 2011, reaching US$ 11.4 billion. Inflows of portfolio investment declined sharply between 2004 and 2008, from US$ 7.1 billion to US$ 1 billion. In 2009 and mainly in 2010, portfolio investments increased to US$ 2.4 billion and US$ 9 billion, respectively, but in 2011 a net outflow of US$5.4 billion was recorded.

The FDI in Israel is determined primarily by the attractiveness of its high-technology industries and its growth prospects. Other main recipients of FDI are the chemicals and metals industries. A significant share of FDI in Israel is made in start-up companies, real estate, and reinvestment of accumulated profits in Israeli companies.

FDI Inflows from Israel to India

Capital inflows from Israel to India remained low, with Israel ranking 43rd during April 2000 to October 2012, at US$ 55.32 million. However, data may not be accurate as FDI from Israel also flows from Europe and USA. Israel companies have invested in India in energy, renewable energy, telecom, real estate and water technologies. Israeli companies are also setting up Research and Development (R&D) centres or production units in Israel.

Indian Investments in Israel

Indian companies are marking their presence in Israel through mergers and acquisitions and opening offices. Several key Indian companies have made significant investments in Israel.

- India's Jain Irrigation in 2007 bought 50 percent of Israel's NaanDan and completely acquired 100 percent stake in Israeli manufacturing company in 2012. The incorporation of NaanDan into Jain has widened the scope of solutions and services provided by NaanDanJain worldwide. This gave tremendous boost to the company's export capabilities and created various opportunities to penetrate new markets.
- India's Sun Pharmaceuticals Industries Ltd acquired 65.2 percent stake in Israel's Taro Pharmaceuticals Industries Ltd.
- Tata Consulting Services has opened an office in Israel in 2007.
- The State Bank of India inaugurated a branch in Ramat Gan's diamond exchange in Tel Aviv.

Case Study: NaanDanJain Irrigation

New irrigation systems, part of broader water resources development projects, are essential for food production and sustainable growth. In developing countries, irrigated agriculture plays a significant role in contributing to domestic food security and poverty alleviation. However, a looming water crisis across the world is forcing researchers to find ways to reduce usage.

Since agriculture accounts for 70 per cent of water consumption, number of companies have been set up with the aim of reducing the amount of water and fertiliser used in food cultivation and developing less thirsty agricultural practices.

NaanDanJain Irrigation Ltd. is the leading global producer and provider of tailor-made irrigation solutions. The company offers the widest range of cost-effective and customized technologies across more than 100 countries worldwide. With over 70 years of experience, NaanDanJain designs high quality solutions that deliver increased productivity per unit of resources. It has great expertise for driving higher crop yields, minimizing risks, and saving precious non-renewable resources.

In the early 1960s, the company's core business was agriculture. In 1980, it started making PVC pipes. The need and the potential increased for a sophisticated and efficient irrigation system for Indian farmers. Soon after, they pioneered and had set up the first manufacturing unit for micro-irrigation.

The world's second-largest micro irrigation company, after Israel's Netafim, Jain Irrigation makes a number of products for irrigation and piping, as well as plastic sheets, dehydrated fruit purée and juice concentrates. Micro irrigation systems (MISs) are Jain Irrigation biggest growth area. Irrigation systems such as drip systems, sprinklers, valves, water filters and plant tissue products, help use water effectively and enhance the productivity of seeds and fertiliser. They are gearing up for the future and are gaining sizeable grounds in promoting micro-irrigation not only in India but all over the world.

In the recent past, to strengthen its MISs portfolio, the company has completed several overseas acquisitions, including Israel's NaanDan, one of the world's largest micro-irrigation company. Since 2007, the merger of NaanDan and Jain Irrigation Systems Ltd has created enriching, multi-cultural business synergy alongside significant product portfolio expansion and R&D activities.

Jain Irrigation is also educating farmers in remote areas, giving them guidance on making farming more profitable and teaching techniques for conserving water, labour, fertiliser and power. ***Source: Financial Times, Inputs from Amnon Ofen, Director, NaanDanJain Irrigation systems***

Select Sectors: Performance and Opportunities

This section analyses a few select sectors with growth potential between India and Israel.

Agribusiness

Israel being a leader in agrotechnologies, sees vast opportunity in the field of agriculture in India. Under a comprehensive work plan for cooperation in agriculture signed on 10 May 2006, bilateral projects are implemented through MASHAV (Centre for International Cooperation of Israel's Ministry of Foreign Affairs) and CINADCO (Centre for International Agriculture Development Cooperation of Israel's Ministry of Agriculture and Rural Development).

The action plan for 2012-15 has been expanded to seven states i.e. Haryana, Maharashtra, Karnataka, Rajasthan, Gujarat, Tamil Nadu and Punjab. Under this initiative, several centres of excellence are being established in various states in India:

- Karnal, Haryana (Vegetables)
- Ratnagiri, Maharashtra (Mango)
- Akola, Maharashtra (Citrus)
- Rahuri, Maharashtra (Pomegranate)

India can benefit from Israeli technologies in horticulture mechanization, protected cultivation, orchard and canopy management, nursery management, micro-irrigation and post-harvest management.

Israel has collaborated with Indian farmers in olive cultivation. Though olives are hardly a staple in India, Rajasthan farmers had joined hands with Israeli agribusiness to produce bumper crop through Israeli expertise and saplings. The project started out as a joint venture between Israeli firm Indolive and the agricultural board of Rajasthan. Finolex Plasson Industries Ltd joined business alliance in 2007 through its subsidiary Plastro Plasson, drumming up greater investment for the enterprise. All parties involved in the

Examples of Israel's relative advantage in Agriculture Technologies:

-Israel agriculturalists have developed revolutionary drip irrigation systems which allow for massive savings in water consumption; Israeli-invented drip irrigation helped achieve 70-80% of water efficiency in agriculture, the highest rate in the world.

- Israel developed some advanced water management and treatment practices due to which 44 percent of the water used in agriculture is recycled. Israel is the world's leading country in water recycling with 80% water recycling rate.

-Israel has developed automated milking and dairy herd management systems and egg-collecting equipment, computerized feeding systems for cattle and production-recording computers which helped reach record yield in terms of milking.

-Computerized fertigation was developed in Israel and exported abroad. Israel is home to the world's largest seawater reverse osmosis (SWRO), desalination plants, annually producing 140-15 million m^3 of water , the most cost-efficient of its kind in the world. The country now desalinates 50% of its municipal consumed water and its irrigation solutions yield the highest ratio of crop per unit. To this day, Israeli desalination is the most economical in the world.

-Gravity-based drip systems for developing countries plus advanced temperature and humidity control methods help create healthy environments for poultry, flowers and out-of season vegetables. Also, Israel has achieved the highest ratio in the world of crop yield per water unit.

Source: Israel-India Business Guide, 2012

joint venture now fall under the umbrella group called the Rajasthan Olive Cultivation Limited(ROCL).

Water Management

Israel has the latest technologies in water management which are of immense value to overcome the challenge of supplying safe and secure water to the citizens of the country. Israel recycles more than 80 percent of water which will go upto 95 percent by the end of this year. Israeli companies have engineered numerous water technologies in drip irrigation, desalination, reverse osmosis, water-metering and security of water projects.

Israel is one of the world's most innovative hubs, especially in the water sector and private companies in India should recognise the importance of advanced technologies which can help creative effective solutions in water conservation and management.

Israel has lot to offer as well as learn from Indian experience in water management. There is tremendous potential for bilateral cooperation. Indian Government has turned to Israel for cleaning up the river Ganga. Israel NewTech, an initiative led by the Israeli Ministry of industry, Trade and Labour, is matching Israeli cleantech companies with Indian partners to tender solutions for the Ganges. The Indian Government aims to have no untreated municipal sewage or industrial runoff enter the Ganges by 2020.

Tourism

Israel and India are looking to double tourism numbers over the next several years. In 2012, an agreement was signed to encourage travel between their countries, including easing visa restrictions for Indians wanting to visit Israel. Some 40,000 Indians visit Israel each year, which is about the same number of Israelis who travel to the sub-continent.

In 2012, the Tourism Ministry of Israel had announced plans to invest US $ 660,000 in opening a tourist office in Mumbai. Tourism Minister of Israel, Mr Stas Misezhnikov had announced that Israel will train more Hindi-speaking guides and will build 200,000 new hotel rooms to accommodate visitors from India. New flights from Israel would be launched to Indian destinations including New Delhi, Goa and Calcutta.

Homeland Security

India is a key export market for Israeli defence firms including Israel Aerospace Industries, Rafael Advanced Defense Systems and Elbit Systems. Defence imports are critical for India's defence establishment, which lacking a domestic military industrial base, remains dependent on foreign

imports for roughly 70 percent of its military purchase. Israel is the second largest military partner of India after Russia.

The first significant Indian purchases of Israeli weapons systems occurred in 1996, when India purchased an air combat manoeuvring system, which was installed at the Jamnagar Air Base along with a US$ 10 million contract for two Dvora MK-2 patrol boats for the Indian navy, while Israeli firm Elta won a multimillion-dollar contract to upgrade the avionics on India's Soviet-built MiG-21 fighter jets.

Another factor bolstering India's purchase of Israeli munitions systems is that, unlike many Western arms companies subject to their governments' considerations, Israeli armaments firms don't insist on either economic or political strict conditions but are relatively liberal on issues of technology transfer.

Major bilateral areas of cooperation include submarine-launched cruise missiles, micro-satellite systems for surveillance, laser-guided systems and precision-guided munitions, anti-ballistic missile systems, radar systems and the upgrading of Soviet and Russian supplied weapons systems, including aircraft, artillery and tanks.

Textiles

Israel in terms of apparel imports has been ranked as 31st largest importer in world with a share of 0.3 percent of total world apparel import. India is ranked as 8th largest supplier of apparel to Israel with a share of 2 per cent in 2011. India’s export in 2011 was to the tune of US$ 21.6 million which had increased by 14 per cent from previous year. However, share of India’s apparel export in Israel apparel import is less than 2 per cent.

In 2012, MoU was signed between Apparel Export Promotion Council (AEPC) and Israel Export and International Cooperation Institute (IEICI) aimed at enhancing trade and economic relation by expanding business and cooperation in the sphere of clothing & fashion industries, innovative technologies and possible solutions for the textile industry.

Energy

Israel has positioned itself as a world leader in the cleantech, attracting hundreds of millions of dollars in this sector as investments per year. Cleantech could become Israel’s biggest export market in the coming years. There is immense scope for business for solar thermal companies in Israel. Some notable Israeli solar thermal companies are Solel, BrightSource Energy, Heliofocus, Zenith solar and AORA.

Israeli power companies are helping India to overcome the challenge of massive power failures as faced by the country in 2012. India has turned to an Israeli company which will build a series of power plants along the Indian coastline, supplying the country with power from waves. SDE has signed letters of intent to construct power plants with the government of the Indian states of Gujarat and Maharashtra, India's Energy Development Agency, the Electricity Regulation Committee (MERC) and the Electric Company of India PTC.

IT & ITeS

Information Technology is one of the promising area for bilateral cooperation between India and Israel. Tata Group and Ramot at Tel Aviv University (TAU), the university's tech transfer company, have entered into a Memorandum of Understanding (MoU) to fund and generate commercialisation ready technologies in a wide range of fields, including engineering and exact sciences, environment and clean technology, pharmaceuticals and healthcare. Under the MoU, Tata Group, through its wholly owned overseas subsidiary, will be the lead investor in Ramot's US$ 20 million Technology Innovation Momentum Fund.

Cyber security has emerged as a new field to further robust cooperation between Israel and India. Israeli companies are being recruited to protect India's network of databases, and enterprise computer systems. India is also managing ongoing cyberattacks against networks throughout the country. Cybercrime is a major problem, with many online businesses lacking the sophisticated software needed to protect their systems. Israel faces similar problems, but has done an excellent job of keeping its systems safe. They have sophisticated technologies, especially in cyber security that India needs to take advantage from. A good example is the joint arrangement between Israel's Sentropi, a developer of security solutions and E-Core Techno, a company in India that markets Sentropi's technologies in dozens of verticals in the Indian market.

Annexure 1

Factsheet of Israel

Official Designation: State of Israel

Capital: Jerusalem

Other Cities:

Population: 7,707,042 (July 2013 est.)

Independence: 14 May 1948 (from League of Nations mandate under British administration)

Government Type: parliamentary democracy

Executive Branch

Chief of state: President Shimon Peres (since 15 July 2007)

Head of government: Prime Minister Binyamin Netanyahu (since 31 March 2009)

Cabinet: Cabinet selected by prime minister and approved by the Knesset

GDP (PPP): $247.9 billion (2012 est.)

GDP (official exchange rate): $246.8 billion (2012 est.)

GDP (real growth rate): 2.9% (2012 est.)

GDP (composition by sectors): agriculture: 2.5%; industry: 31.4% ; services: 66.1% (2012 est.)

Inflation rate (consumer prices): 2.1% (2012 est.)

Exchange Rate: new Israeli shekels (ILS) per US dollar - 3.9 (2012 est.)

Agricultural-Product: citrus, vegetables, cotton; beef, poultry, dairy products

Industries: high-technology products (including aviation, communications, computer-aided design and manufactures, medical electronics, fiber optics), wood and paper products, potash and phosphates, food, beverages, and tobacco, caustic soda, cement, construction, metals products, chemical products, plastics, diamond cutting, textiles, footwear

Exports: $64.74 billion (2012 est.)

Major Export commodities: machinery and equipment, software, cut diamonds, agricultural products, chemicals, textiles and apparel

Export Partners: US 28.8%, Hong Kong 7.9%, Belgium 5.6%, UK 5%, India 4.5%, China 4% (2011)

Imports: $77.59 billion (2012 est.)

Major Import Commodities: raw materials, military equipment, investment goods, rough diamonds, fuels, grain, consumer goods

Import Partners: US 11.8%, China 7.4%, Germany 6.2%, Belgium 6.1%, Switzerland 5.4%, Italy 4.2% (2011)

Annexure-2

Top 10 export commodities of India to Israel, 2012-13(US$ Millions)

S.No.	HSCode	Commodity	2011-2012	2012-2013
1	27	Mineral Fuels, Mineral oils and Products of their distillaion, bituminous substances, Mineral Waxes	1,701.88	1,694.94
2	71	Natural or cultured pearls ,precious or semi- precious stones, pre-metals, clad with premetals and articles thereof;imitation jewellery;coin	1,456.12	1,158.02
3	29	Organic Chemicals	231.54	245.07
4	39	Plastic and articles thereof	73.79	64.5
5	87	Vehicles other than railway or tramway rolling stock , and parts and acessories thereof	64.78	63
6	85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers and parts	67.67	60.18
7	88	Aircraft, spacecraft and parts thereof	39.06	52.95
8	38	Miscellaneous chemical products	24.05	33.57
9	90	Optical, photographic cinematographic measuring, checking precision, medical or surgical instruments and apparatus parts and accessories thereof	26.67	32.93
10	10	Cereals	12.77	29.62

Source: Export Import Databank, Ministry of Commerce & Industry

Top 10 import commodities to India from Israel, 2012-13(US$ Millions)

S.No.	HSCode	Commodity	2011-2012	2012-2013
1	71	Natural or cultured pearls, precious or semiprecious stones, premetals ,clad with pre-metal and articles thereof, imitation jewellery, coins	1,318.25	1,195.21
2	31	Fertilisers	310.19	260.08
3	85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts.	221.26	202.91
4	84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof.	83.78	115.26
5	90	Optical, photographic cinematographic measuring, checking precision, medical or surgical inst. And apparatus parts and accessories thereof;	73.47	103.46
6	29	Organic chemicals	82.69	103.14
7	28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, or radi. Elem. Or of isotopes.	96.82	59.64
8	25	Salt; sulphur; earths and stone; plastering materials, lime and cement.	38.49	37.56
9	38	Miscellaneous chemical products.	25.17	28.19
10	76	Aluminium and articles thereof.	18.92	25.17

Source: Export Import Databank, Ministry of Commerce & Industry

Annexure-3

FICCI's Initiatives with Israel

- An Interactive Session with Ms Orit Noked, Hon'ble Minister of Agriculture & Rural Development, Israel and accompanying Business delegation was organized in May 2011, New Delhi.
- FICCI organized a Business Meeting with Hon'ble Benjamin (Fuad) Ben-Eliezer, Ministry of Industry, Trade and Labour and the accompanying 30-Member Business Delegation from Israel, January 11, 2010, Hotel Taj Palace, New Delhi.
- FICCI took a 12-member delegation to Israel for a workshop on "Dairy Development and Management" from July 26–August 4, 2009. The workshop was organized in collaboration with Embassy of Israel in India, MASHAV and CINADCO, Israel.
- FICCI took a 17-member Business Delegation to participate in Agritech 2009 held at Israel in May 2009.
- FICCI in cooperation with Embassy of Israel in India organized a seminar on Urban Water Management Solutions Forum in December 2008 at New Delhi.
- FICCI organized a meeting with H E Mr Shalom Simhon, Hon'ble Minister of Agriculture & Rural Development and the accompanying Delegation from Israel in January 2008 to New Delhi and Jaipur.
- Business Delegation to Israel accompanying the Hon'ble Minister of State for Industries, Mr Ashwani Kumar in August 2007 to Tel Aviv.
- FICCI organized a Round Table Luncheon Meeting in Honour of HE Mr Shaul Mofaz, Hon'ble Deputy Prime Minister and Minister of Road Safety & Transport of Israel and the accompanying Delegation in March 2007.
- A Business Meeting with Mr Eliyahu Yishai, MK, Deputy Prime Minister , Ministry of Industry, Trade and Labour (Shas) of Israel on December 6, 2007.
- Organized on the on-spot training programme in Delhi in the sectors of dairy, international marketing of resh produce, waste water recycling, irrigation systems etc with the help of experts from Israel in 2006.
- FICCI took a 30-member business delegation led by Dr Amit Mitra, Secretary General, FICCI for participation in Agritech 2006 accompanying Mr Sharad Pawar, Hon'ble Minister for Agriculture, Government of India in May 2006.
- FICCI took a 10-member business delegation led by Mr Saroj Kumar Poddar, the then Senior Vice President FICCI, to Israel, coinciding with the visit of Mr Kamal Nath, Hon'ble Commerce and Industry Minister, Government of India in November 2005. During the visit, FICCI

participated in the Israel Gateway 2005 exhibition and Buyer Seller Meet/Seminar corresponding with the Israeli Prime Economic Conference for Export and International Cooperation.

- FICCI did a study on India-Israel Trade Synergies Convergence and Constraints in August 2005.
- Seminar on promoting India' trade and Investment linkages with Israel at New Delhi on March 2005.
- A 15-member high powered FICCI business delegation led by the then President FICCI, Mr Y K Modi, visited Israel for the India-Israel Joint Business Council Meeting and Destination India. The event was held co-terminus with the Third India Israel Joint Trade and Economic Committee on January 14-15, 2004 in Israel. The India-Israel JBC Meeting and Destination India was inaugurated by the then Hon'ble Minister for Commerce & Industry and Law & Justice of India, Mr Arun Jaitley.
- Meeting with H E Mr Ehud Olmert, the then Vice Prime Minister, Ministry of Industry, Trade & Labour and the accompanying delegation from Israel at New Delhi in December 2004.
- FICCI was presented the Israel Trade Award 2003 by the State of Israel's Ministry of Industry, Trade and Labour, in recognition of outstanding contribution in the forging of international trade links with Israel by Mr Ehud Olmert, Vice Prime Minister, Ministry of Industry, Trade and Labour.
- Interactive Meeting with H E Mr Maj Gen.(Retd) Ariel Sharon , the then Hon'ble Prime Minister of Israel and the accompanying delegation in September 2003 at New Delhi.
- Meeting with Agricultural Delegation led by Mr Daniel Krichman, Secretary, Agriculture and Rural Development, Government of Israel, January 29, 1998.