

Israel's High-Tech Boom

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While the American economy has been hurt in recent months by the subprime crisis and the resulting ripple effect into other parts of the global economy, some sectors have still profited. Notably, oil and other commodities have made handsome gains. Surprisingly, spring 2008 witnessed a better-than-expected earnings season for some high-tech stocks, too.

Unbeknownst to many investors, Israel has played a significant role in recent tech gains. Intel's new micro processing chip is being made in Israel, not California. Silicon Valley-based multi-national giants like Google, Oracle, and Applied Materials now maintain facilities in Israel that are integral to their operations. Fueled by venture capital investment in industries like communications, information technology, pharmaceuticals, medical devices, biotechnology, alternative energy, and cleantech, Israel's high-tech industry is not just booming, it is a worldwide leader.

A Global Competitor

The global financial community is beginning to see the benefits of investing in Israeli industry. In 2006, foreign investment in Israel totaled \$26 billion. Real Gross Domestic Product (GDP) growth has averaged a staggering 5 percent over the last three years. According to Morgan Stanley, "high technology goods and services have developed beyond the wildest projections and now account for about one-third of GDP and 75 percent of industrial exports," making Israel "one of the most competitive economies in the world."

Global competitiveness indices support this statement. The World Economic Forum ranks Israel second in the world for the amount of funds raised by technology start-ups, following only the U.S. Israel ranks first in Research and Development (R&D) expenditure as a percentage of GDP, third in skilled labor availability, and fourth in quality of scientific research institutions. This is remarkable for a country that is only 60 years old with 7 million residents, hostile neighbors, and limited natural resources.

Israel is starting to receive the recognition it deserves in world economic forums. Last year, the Organization for Economic Development and Cooperation (OECD) invited Israel to commence the process for accession to the organization. Through its decision to include Israel, the OECD acknowledges that Israel's economic and fiscal policies comply with the highest international standards.

Intellectual Capital

Israel's success, to a certain extent, stems from its history, geography, and visionary government leaders. Waves of immigration, first from Eastern Europe and later from the former Soviet Union, led to the development of an exceptionally educated and skilled workforce. According to Larry Ellison, the CEO of Oracle, "What's really different about Israel compared with other places we do business is the number of partners we have in the technology area. Israel has always had a wealth of intellectual talent." Presently, Israel has more scientists and engineers, proportional to its population, than any other country — 145 for every 10,000 people.

Faced with multiple military threats, Israel's scientists and engineers have developed sophisticated military technologies. Fortunately for Israel, many of these technologies have important commercial applications. The lack of natural resources has also led Israeli scientists to find innovative solutions for irrigation and solar power.

A seemingly limitless supply of high-tech talent at below U.S. market salaries has made Israel an attractive site for multinational R&D labs. "The cost of an Israeli engineer is still about 80 percent of his counterpart in Silicon Valley," notes Moshe Zviran, an Israeli expert who tracks high-tech manpower.

This competitive advantage is diminishing, however, as the shekel gains against the U.S. dollar. Wages have increased annually for the last three years, and Israel now faces mounting competition from India and China, where wages are almost 80 percent lower than in Israel.

Incubators

One notable aspect of the Israeli success story is how the government worked to create an economic infrastructure that enabled Israel to reach its current levels of economic success.

In the early 1990s, the Israel government created an incubator program to leverage the strengths of approximately 750,000 scientists, engineers, and physicians who had just arrived from Russia. Israel's Office of the Chief Scientist (OCS), a division of the Ministry of Industry Trade & Labor, started six "incubators" designed to integrate newcomers with local talent and to foster early stage technology development through entrepreneurship. Today there are 24 such incubators located throughout Israel, and 65 percent of the projects are science-related research and development.

The OCS's investment has paid off. Today, 30 to 40 percent of the OCS budget is derived from royalty payments from companies that initially received government support through its grant program. In 2007, incubator companies raised \$435 million in private funds, up 74 percent from 2006. Currently, the OCS allocates approximately \$1 billion per year to incubators and other programs that encourage technology development.

Yozma

Incubators are not the only government-sponsored programs fueling growth in Israel's high-tech industry. In 1993, the government created the Yozma program to stimulate venture capital and attract foreign investment. At its inception, Yozma consisted of 10 new venture capital funds, managing \$20 million each, capitalized with a combination of government funds (40 percent) and foreign investment (60 percent). Yozma made 15 direct investments and nine enjoyed successful exits, either through public offerings or acquisitions.

Yozma attracted major international venture investors like Advent from the U.S., Daimler-Benz from Europe, and Kyocera from the Far East. The average size of the leading Israeli venture capital fund jumped from \$20 million to more than \$250 million today. Israel's venture capital industry is now second only to the U.S. Currently, Israel has 80 active funds and total capital under management in excess of \$10 billion.

Encouraging Investment

Israel's government has also enacted laws to encourage foreign investment. For example, corporate income taxes have been reduced from 36 percent in 2003 to 27 percent in 2008. Additionally, the government approved a tax exemption on capital gains from foreign investment until the end of 2008.

Moreover, unlike other emerging market economies, Israeli investment laws have helped shape a stock exchange that brings the public into its companies.

Founded in 1953, the Tel Aviv Stock Exchange (TASE) is a key player in the nation's economic growth. As private venture capital investment began to fuel technology development in the mid-1990s, the TASE developed state-of-the-art practices and protocols to meet the standards of international modern exchanges. The TASE reported an unprecedented number of initial public

offerings in the first quarter of 2007. Israeli companies continue to list on the NASDAQ and New York Stock Exchange. In fact, Israel has more companies trading on the NASDAQ than any country other than the United States.

Israel's Top High-Tech Firms

Israel's best-known recent success is Iscar Metalworking, a leader in precision metalworking tools. The company attracted international attention when Warren Buffett's Berkshire Hathaway Inc. made an 80 percent acquisition of \$4 billion, its first investment deal outside of the U.S., and the largest corporate deal in Israel's history. According to Buffet, Iscar is an "amazing company run by amazing people. I don't get many opportunities to invest in companies like that."

Teva, an Israeli global pharmaceutical company, has also become a household name. With operations in over 50 countries and approximately 26,000 employees worldwide, Teva is among the top 20 pharmaceutical companies and among the largest generic pharmaceutical companies in the world. According to Israeli government data, Teva's net income for 2007 reached \$1.952 billion, 5 percent more than 2006.

Another well-known Israeli company is Check Point Software Technologies, a global leader in internet security. Check Point's worldwide distribution includes 2,200 channel partners in 88 countries. Each and every *Fortune 100* company uses Check Point security solutions. Revenues for 2007 were \$730.9 million, an increase of 27 percent compared to \$575.1 million for 2006.

Attracting High-Tech Multinationals

Many global corporations have come to Israel, either to benefit from its intellectual capital or its acquisition opportunities. General Electric was among the first international companies to establish a presence in Israel. In 1970, NBC Universal, a GE subsidiary, opened its Tel Aviv office, and by 1984, the Israel Defense Force (IDF) was buying GE engines for its F-16 aircraft. GE solidified its

presence in Israel in 2002 through GE Healthcare Israel Ltd., which revolutionized healthcare in producing the world's first miniature, portable cardiac ultrasound system; the first combined nuclear and CT imaging scanner; and a new generation CT reconstruction engine.

SAP, the German-based business software developer, which has more than 33,200 customers in over 120 countries and employs more than 36,600 people in 50 countries worldwide, made its initial investment in the Israeli company OFEK-Tech, which in 2000 became a SAP subsidiary called SAP Labs Israel. SAP Labs Israel is the company's fourth largest development center worldwide. Today, the R&D facility in Carmiel employs around 800 people.

The Next Silicon Valley?

Can Israel compete with high-tech centers in the U.S. like Silicon Valley for venture capital investment? In absolute terms, Israel's venture capital market is significantly smaller than the U.S. market. Still, Israel is growing and attracting new investment, particularly in the area of seed stage development.

Israel's venture capital industry equals roughly 7 percent of the U.S. venture capital market. In 2007, 462 Israeli high-tech companies raised \$1.7 billion from local and foreign investors compared to 1,169 California companies that raised \$10.8 billion. But, venture capital investment in Israel continues to grow year over year, and seed stage investment in Israel is roughly equal to the U.S.—\$88 million in Israel compared to \$110 million in the U.S. at the end of 2005. In 2006, Israel's Mergers and Acquisition (M&A) activity hit an all-time high with 84 transactions aggregating more than \$10 billion. In 2007, mergers and acquisitions of high-tech companies totaled \$3.2 billion. There were 60 Israeli company acquisitions totaling \$2.5 billion, while 27 companies raised \$701 million in IPOs.

In relative terms, Israel's performance statistics in venture capital investment are nothing short of impressive. Israel's ability to raise funds was outmatched in the U.S. only by Silicon Valley and Boston. Israel has raised more venture capital investment than any European country by a margin of 20 percent. Israel reported 20 venture-backed public offerings in 2006 and 26 in 2007 compared to 57 and 86 for the same years in the U.S.

With 1,800 active start-ups—the highest seed stage investment levels since the dot com boom of the 1990s —and a diversified high-tech pipeline spread out evenly over the communications, life sciences, semi-conductors, and internet technologies fields, Israel is poised for greater growth as a venture-backed economy. In early 2008, IBM and Microsoft made acquisitions in Israel aggregating in excess of \$300 million.

Israel's Economic Outlook

Even as the global economy continues to take investors on a wild ride, many economists predict that Israel's economy will continue to grow steadily in 2008, despite a crippled U.S. dollar. Much of this is due to the success of Israel's high-tech investments and development in recent decades.

Israel's success is also based on attitude—a unique combination of curiosity and *chutzpah*. During Larry Ellison's recent trip to Israel, he attributed Israel's success to the constant questioning of conventional wisdom.

"Businessmen are successful when they question the norms that conventional wisdom espouses," Ellison said. "That is where innovation comes from—finding errors in conventional wisdom. That is what my company is built upon and that is why I think Israel will continue to be innovative."

Israel's level of investment may not match Silicon Valley dollar for dollar, but Israel has outperformed the rest of the world in a global marketplace. Indeed,

despite the fact that the Jewish state has been forced to expend much of its energy battling for its own security over the 60 years since it declared independence, Israel continues to demonstrate its strength as a formidable candidate in the battle for investment capital in an increasingly competitive marketplace.

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