

Israel's High-Tech Pipeline to America

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President Obama was right when he noted that innovation is just as important to the U.S.-Israel relationship as security cooperation.

Why did President Obama visit Israel this week, on the first foreign trip of his second term? The U.S. and Israel share democratic values, of course, and there were pressing issues to discuss publicly and privately, including peace with the Palestinians, the civil war in Syria, and Iran's march to nuclear-weapons capability. But there is an additional consideration that is too rarely emphasized: Israel is helping the U.S. meet the economic, environmental and non-military security challenges of the future.

Cyber security -- which the Pentagon now says could pose a strategic threat to U.S. infrastructure -- is a case in point. Israeli systems secure a significant and growing proportion of U.S. telecommunications, financial transactions, utility and other essential computer-dependent operations. Last year, Cisco paid \$5 billion to acquire the Israeli-founded firm NDS, one of the top providers of encryption technology for television and video.

Israeli experts and start-ups regularly partner with U.S. firms to develop applications such as instant messaging, Internet telephony (Voice Over Internet Protocol) and data-mining. In January, Intel executive Greg Slater noted that many of his company's major innovations over the past three decades started in Israel -- including the latest "Ivy Bridge" and "Sandy Bridge" microprocessors, which accounted for 40% of Intel revenues in 2011. He said Intel has never had a significant piracy, patent or production-line problem in Israel. Microsoft founder Bill Gates said in 2006 that the "innovation going on in Israel is critical to the future of the technology business." (See "[Asset Test: New Strategic and Economic Dimensions of U.S.-Israeli Relations \(/policy-analysis/view/asset-test-perspectives-on-](/policy-analysis/view/asset-test-perspectives-on-Strategic-and-Economic-Dimensions-of-U.S.-Israeli-Relations/)

the-benefits-of-americas-alliance-with-israel).")

The World Economic Forum ranks Israel among the world's top countries for technological and business innovation. Scores of major U.S. manufacturers -- from General Electric to General Motors, Microsoft, IBM, Google, Apple and others -- have R&D centers and technology incubators in Israel, where they conduct research at about one-half to two-thirds of the cost in the U.S. (thanks to lower labor, rent and regulative costs, plus public investment and tax incentives).

Israel returns the favor, each year contributing thousands of skilled professionals, hundreds of joint patent applications, and hundreds of coauthored scientific and technical papers to the U.S. economy -- almost half as many as contributed by Germany, which has 10 times Israel's population. In these areas, said State Department science and technology adviser Dr. E. William Colglazier last year, "Israel is a world leader and a model not only for small countries, but all countries."

With about 3% of the region's population, Israel accounted for about 25% of U.S. exports to the Middle East in 2011. For seven years, U.S. exports to Israel have equaled or surpassed those to oil-rich Saudi Arabia. Across the U.S., Israeli firms or their subsidiaries have set up manufacturing plants that employ tens of thousands of Americans.

Each year Israel sells the U.S. military about \$1.5 billion in advanced items, from specialized munitions to life-saving armor and sensors for intelligence, surveillance and reconnaissance. Many such items are produced by Israeli firms working with American partners (such as General Dynamics or Northrop Grumman), or by U.S. subsidiaries of Israeli firms. U.S. and Israeli manufacturers are now partnering to sell Israeli rocket and missile interceptors, such as David's Sling and Arrow, to U.S. allies.

These partnerships have helped the U.S. preserve its military edge. When the U.S. gives Israel \$3 billion in annual military aid, 75% of it comes back to purchase American-made products and services. And because Israel is a top innovator in the technologies of modern warfare -- cyber, unmanned vehicles, robotics, missile defense -- it will remain an important source of innovation for American defense contractors and troops.

Israel is also a world leader in micro irrigation, wastewater management and reverse-osmosis desalination. Netafim, an Israeli manufacturer of drip-irrigation products, has a production facility in California and has captured half of global market share in this key tool against the risk of climate change. Israeli breakthroughs in high-tech agriculture are permitting increases in productivity for farmers and aquaculturists around the world, in turn promoting sustainability and political stability in the developing world.

Although Israel generally lags behind other advanced economies in its domestic use of alternative and renewable energy sources, Israeli inventors have been top finishers in recent GE Ecomagination competitions. One 2011 winner -- a solar window that produces enough electricity to make large buildings energy self-sufficient -- was developed by Israel's Pythagoras Solar and is now being produced and marketed in partnership with an American firm.

The U.S.-Israel relationship isn't symmetrical, as the U.S. provides Israel with indispensable diplomatic and military assistance. But it is a two-way street. "I think we underestimate the economic links between our countries," said Sen. Marco Rubio (R., Fla.) after a trip to Israel last month. "Israel is a great place to start up a company, or...to partner with a bigger company -- a Johnson & Johnson or an IBM." (See "[**A Conversation on the Middle East featuring Senator Marco Rubio \(/policy-analysis/view/a-conversation-on-the-middle-east-featuring-senator-marco-rubio\).**](#)")

Israeli researchers, scientists, engineers, entrepreneurs, doctors and others are all helping the U.S. promote nation-building at home and security and sustainability abroad. President Obama recognized this week that "innovation is just as important to the relationship between the U.S. and Israel as our security cooperation" -- a fact leaders should

reaffirm in future, less ceremonial discussions of the Middle East.

Michael Eisenstadt and David Pollock are senior fellows at The Washington Institute and authors of the 2012 study [Asset Test: How the United States Benefits from Its Alliance with Israel \(/policy-analysis/view/asset-test-how-the-united-states-benefits-from-its-alliance-with-israel\)](#). ❖

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