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High-Tech Power-Couple: Israel & South Korea

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South Korea is consistently ranked as one of the most innovative countries, and the fuel that has powered this astonishing metamorphosis is technology. But there are also a number of challenges looming over the horizon that will hamper South Korea's growth if not effectively addressed. As Korean policymakers, aid workers and scientists look to solve challenges, they should turn to Israel to find existing innovations that can make a difference, or create new ones together.

Since the Republic of Korea declared independence in August 1948, it has transformed its economy from one of the world's poorest to one of the richest. Last week, Reuters issued its annual ranking of the world's most innovative universities, the ones doing the most to advance science, invent new technologies and power new markets. Not surprisingly, Korea had eight of the top 100 universities.

Korea's development and rapid industrializing is often cited as a model for other nations. However, the country is experiencing increasing income inequality and polarization, coupled with a shrinking middle class. Economists believe that rising inequality is a result of three factors: wage gaps between regular and part-time workers; gender inequality; and a rapidly aging population, which over time will lead to fewer working-aged individuals with the skills to meet market demands and will thus impact productivity.

Another major problem is the dominance of large business conglomerates, known in Korea as *chaebols*, which make it very hard for small- and medium-sized enterprises (SMEs) to bring ideas to market. Experts agree that SMEs tend to have low productivity and quickly become technologically outdated, both of which contribute to the salary gap between them and the large conglomerates.

The way government officials and policymakers address these issues will determine how the country fares economically in the medium-to-longterm. To retain its competitive edge, Korea will need to create new growth industries and diversify its economy, including through high-value innovation.

One of the countries with which Korea can deepen its ties to explore ideas that promote innovation is Israel, with which it has much in common. Both are relatively young countries (established within a few months of each other), born out of war and living under constant military threat. Korea and Israel have both become regional economic superpowers, though they have few natural resources other than brain power. There is a tremendous amount that these two democracies can do to leverage their relationship for the greater benefit of their societies.

Both countries have strengths and weaknesses, which seem to complement the other. Israel is strong at creating highly innovative core technologies, while Koreans know how to take core technologies and turn them into commercially viable products. Korean conglomerates have traditionally engaged in low-to-medium-risk technology projects, while Israel excels in innovative technologies and startups, does well with risk and improvisation, and doesn't fear failure. Korea does exceedingly well in creating large international corporation, while for Israeli companies, scaling up has been a major challenge.

Israeli innovations today are collectively changing the lives of billions of people around the world by feeding the hungry, curing the sick, protecting the defenseless and making the desert bloom. And Israeli technology is also improving the lives of Koreans every day. To cite just a few examples, Waze is not only popular in the Republic after its launch of a "Korean" voice last year, but also is the world's most popular app for navigating traffic and reducing gas consumption; drip irrigation helps conserve more water and grow more food throughout the country; a GPS for brain surgeons guides them as they carry out deep brain stimulation procedures for disorders like Parkinson's is on the rise; and the use of the PillCam, an ingestible camera that can travel through the intestines to take pictures of your insides, is increasing in Korea, and has changed the way doctors screen, diagnose and treat internal diseases.

What has led so many Israelis to change the world with these incredible innovations? Israel's success stems from a number of factors, including a culture that encourages questioning and challenging authority. The country embraces its ethnic, political and religious diversity and strongly values secular institutions. Other factors, such as chutzpah, obligatory military service, renowned universities, smart big government and a dearth of natural resources come together as national characteristics to explain how tiny Israel became a technological powerhouse.

These factors are combined with a 3,000-year-old religious tradition that has been calling on us all to do our part to repair the world, including feeding the hungry, curing the sick and helping those in need. This concept of *tikkun olam* has helped to shape the pursuit of a greater purpose in Jewish culture.

As the world faces many grave challenges, including some threatening the very future of our planet and humanity, Israel and Korea have the opportunity to work together to find creative solutions that make an impact. Together, these two countries should combine their efforts to leverage technology to address humanity's largest challenges.

Avi Jorisch is the author of Thou Shalt Innovate: How Israeli Ingenuity Repairs the World (Gefen Publishing). He is also a Senior Fellow at the American Foreign Policy Council and the Israel Project.